

INTERNATIONAL MONETARY FUND



# Monetary and Financial Statistics

Compilation Guide

---



INTERNATIONAL MONETARY FUND



# Monetary and Financial Statistics

COMPILATION GUIDE

---

2008

© 2008 International Monetary Fund

Production: Multimedia Services Division

Cover: Lai Oy Louie

Typesetting: Choon Lee

### **Cataloging-in-Publication Data**

Monetary and financial statistics : compilation guide — Washington, D.C. :  
International Monetary Fund, 2008.

p. cm.

Includes bibliographical references.

ISBN 978-1-58906-584-0

1. Money — Statistics — Handbooks, manuals, etc. 2. Finance — Statistics  
— Handbooks, manuals, etc. 3. International Monetary Fund. I. International  
Monetary Fund.  
HF219.M66 2008

Price: \$45.00

Please send orders to:

International Monetary Fund, Publication Services  
700 19th Street, N.W., Washington, D.C. 20431, U.S.A.

Tel.: (202) 623-7430      Telefax: (202) 623-7201

E-mail: [publications@imf.org](mailto:publications@imf.org)

Internet: <http://www.imf.org>

# Contents

<b>Foreword</b> .....	<b>vii</b>
<b>Preface</b> .....	<b>ix</b>
<b>Abbreviations</b> .....	<b>xi</b>
<b>I Overview</b> .....	<b>I</b>
Introduction .....	1
Historical Perspective .....	1
Relationship to the <i>System of National Accounts 1993</i> and Its Update .....	2
Relationships Among Macroeconomic Statistical Systems .....	4
Overview of Chapter Contents .....	6
Annex 1.1. Revisions to the <i>Monetary and Financial Statistics Manual, 2000</i> .....	8
<b>2 Source Data for Monetary and Financial Statistics</b> .....	<b>11</b>
Introduction .....	11
International Financial Reporting Standards .....	12
International Financial Reporting Standards and <i>Monetary and Financial Statistics Manual</i> Methodology .....	13
Data from an Information System .....	23
Other Source Data .....	28
Validation and Plausibility Testing of Reported Data .....	31
Annex 2.1. Accrued Interest in the Accounts .....	33
Annex 2.2. Valuation Changes in the Accounts .....	33
<b>3 Institutional Units and Sectors</b> .....	<b>41</b>
Introduction .....	41
Institutional Units .....	41
Residency .....	43
Sectorization of Institutional Units .....	47
<b>4 Classification of Financial Assets</b> .....	<b>67</b>
Introduction .....	67
Deposits .....	67
Securities Other Than Shares .....	70
Loans .....	73
Shares and Other Equity .....	77
Insurance Technical Reserves .....	79
Financial Derivatives .....	85
Other Accounts Receivable/Payable .....	91
Annex 4.1. Guidance for Distinguishing between Deposits and Loans .....	96

<b>5 Stocks, Flows, and Accounting Rules . . . . .</b>	<b>99</b>
Introduction . . . . .	99
Stocks and Flows: An Overview . . . . .	99
Stocks and Flows: By Asset Classification . . . . .	106
Other Accounting Issues . . . . .	160
Annex 5.1. Estimation of Transactions and Valuation Changes . . . . .	167
Annex 5.2. Settlement Date and Trade Date Accounting . . . . .	169
<b>6 Money, Credit, and Debt . . . . .</b>	<b>172</b>
Introduction . . . . .	172
National Currency . . . . .	172
Foreign Currency . . . . .	174
Deposits . . . . .	178
Electronic Money . . . . .	180
Monetary Base . . . . .	181
Reporting of Monetary Aggregates to the IMF (Form 5SR) . . . . .	182
Presentation of Monetary Aggregates in <i>International Financial Statistics</i> . . . . .	182
Divisia Money . . . . .	183
Credit and Debt . . . . .	184
Seasonal Adjustment of Economic Time Series . . . . .	184
Annex 6.1. Reserve Requirements . . . . .	190
<b>7 Framework for Monetary Statistics . . . . .</b>	<b>192</b>
Introduction . . . . .	192
Reporting by Financial Corporations . . . . .	192
Sectoral Balance Sheets . . . . .	195
Surveys of Financial Corporations . . . . .	199
Monetary Authorities Account . . . . .	203
Reporting to the IMF . . . . .	203
Data Dissemination . . . . .	205
Supplementary Data . . . . .	206
Annex 7.1. Other Changes in the Volume of Assets . . . . .	207
Annex 7.2. Consolidation Adjustments . . . . .	213
Annex 7.3. Surveys of the Financial Corporations Sector . . . . .	213
Annex 7.4. Monetary Authorities Account . . . . .	213
Annex 7.5. Supplementary Data: Guidance Notes . . . . .	213
<b>8 Financial Statistics . . . . .</b>	<b>231</b>
Introduction . . . . .	231
Definition, Scope, and Framework . . . . .	233
Presentation . . . . .	237
Compilation Methods and Source Data . . . . .	243
Systematic Development . . . . .	249
Structure . . . . .	251
Estimation Techniques for Missing Data . . . . .	266
Editing, Data Checking, and Statistical Discrepancies . . . . .	268
<b>Appendixes</b>	
I Illustrative Sectoral Balance Sheets . . . . .	271
II Standardized Report Forms . . . . .	293

<b>References</b> .....	<b>339</b>
<b>Index</b> .....	<b>342</b>
<b>Boxes</b>	
1.1. Macroeconomic Statistics at the IMF: Other Manuals and Guides .....	5
2.1. Data Quality Assessment Framework of the IMF .....	15
2.2. Financial Asset and Liability Classifications in the Monetary Statistics .....	19
2.3. International Financial Reporting Standards Classification of Assets and Liabilities: Valuation and Accounting for Gains and Losses .....	21
2.4. Debits and Credits to the Accounts .....	24
2.5. Accounting for Accrued Interest: Examples .....	26
2.6. Shares and Other Equity Account: Example of the Stock and Flow Data for a Period. ....	28
3.1. Main Sectors and Subsectors of the Economy .....	48
3.2. Currency Unions and Regional Central Banks .....	49
6.1. Monetary Base: Representative Components .....	181
6.2. Monetary Base in the <i>Central Bank Survey</i> .....	182
6.3. Broad Money in Report Form 5SR for Monetary Aggregates .....	183
6.4. Divisia Money .....	184
6.5. Structure of the X-12-ARIMA Estimation. ....	187
6.6. ARIMA Models .....	188
6.7. Three-Component Seasonal Adjustment Model in Multiplicative Form. ....	189
7.1. Other Accounts Receivable—Other .....	196
7.2. Other Accounts Payable—Other .....	197
7.3. Memorandum Items to Accompany a Sectoral Balance Sheet .....	198
7.4. Financial Assets in the Surveys: Major Categories for Resident Sectors .....	200
7.5. Liabilities in the Surveys: Major Categories for Resident Sectors .....	201
8.1. Relationship Between the Balance Sheets and Accumulation Accounts in the <i>1993 SNA</i> .....	234
8.2. Concept of Three-Dimensional Flow of Funds Accounts .....	240
<b>Tables</b>	
2.1. Other Depository Corporation: Accrued-Interest Accounts .....	34
2.2. Other Financial Intermediary: Accrued-Interest Accounts .....	35
2.3. Life Insurance Corporation: Accrued-Interest Accounts .....	35
2.4. Other Depository Corporation: Accounts for Gains and Losses (Valuation Changes) .....	36
2.5. Other Financial Intermediary: Accounts for Gains and Losses (Valuation Changes) .....	38
2.6. Life Insurance Corporation or Pension Fund: Accounts for Gains or Losses .....	40
4.1. Securities Other Than Shares: Some Standard Types .....	70
4.2. Securities Other Than Shares: Some Types Traded in International Markets .....	71
4.3. Standard Types of Forward and Futures Contracts .....	86
4.4. Standard Types of Options Contracts .....	87
4.5. “Exotic” Options Contracts: Examples .....	88
4.6. Credit Derivatives: Standard Types Classified as Financial Derivatives .....	89
4.7. Energy, Weather, and Insurance Derivatives: Examples .....	90
5.1. Stock and Flow Data: Adding-Up Requirements .....	100
5.2. Transactions: By Asset/Liability Category .....	103
5.3. Valuation Changes: By Asset/Liability Category .....	104
5.4. Assets and Liabilities of Financial Corporations .....	107

5.5. Compounding and Discounting at Continuously Compounded Rates. . . . .	144
5.6. Black-Scholes Model for Pricing European Stock Options. . . . .	153
5.7. Black Model for Pricing European Options on Bonds, Swaps, and Other Interest Rate Instruments . . . . .	154
7.1. Other Changes in the Volume of Assets: Central Bank . . . . .	208
7.2. Other Changes in the Volume of Assets: Other Depository Corporations. . . . .	209
7.3. Other Changes in the Volume of Assets: Other Financial Corporations . . . . .	211
7.4. Consolidation Adjustment: <i>Other Depository Corporations Survey</i> . . . . .	215
7.5. Consolidation Adjustment: <i>Depository Corporations Survey</i> . . . . .	216
7.6. Consolidation Adjustment: <i>Other Financial Corporations Survey</i> . . . . .	217
7.7. Consolidation Adjustment: <i>Financial Corporations Survey</i> . . . . .	218
7.8. <i>Central Bank Survey</i> . . . . .	219
7.9. <i>Other Depository Corporations Survey</i> . . . . .	221
7.10. <i>Other Financial Corporations Survey</i> . . . . .	223
7.11. <i>Depository Corporations Survey</i> . . . . .	224
7.12. <i>Financial Corporations Survey</i> . . . . .	225
7.13. Monetary Authorities Account. . . . .	226
7.14. Supplementary Data for the Central Bank, Other Depository Corporations, and Other Financial Corporations . . . . .	228
8.1. Summarized Financial Statistics Matrix: Transactions . . . . .	238
8.2. Summarized Financial Statistics Matrix: Stock Positions . . . . .	239
8.3. Summarized Financial Statistics Matrix: Other Flows . . . . .	240
8.4. Financial Corporations Table for Three-Dimensional Structure . . . . .	241
8.5. Nonfinancial Corporations Table for Three-Dimensional Structure . . . . .	242
8.6. Other Residents' Assets (Transactions, Other Flows, and Stock Positions) . . . . .	243
8.7. Shares and Other Equity by Holding Sector (Transactions, Other Flows, and Stock Positions). . . . .	244
8.8. Types of Main Source Data . . . . .	246
8.9. Types of Supplementary Source Data . . . . .	247
8.10. Adjustments for Data Comparability . . . . .	248
8.11. Levels of Financial Statistics . . . . .	250
8.12. Level 1 Financial Statistics Matrix . . . . .	252
8.13. Examples of Sectors and Financial Instrument Categories in Level 2 Financial Statistics . . . . .	254
8.14. Stock Positions of Financial Corporations. . . . .	257
8.15. Adjustment for Conflicting Data . . . . .	258
8.16. International Investment Position Mapping into Level 2 Financial Statistics . . . . .	260
8.17. Examples of Disaggregated Data Categories at Level 3 . . . . .	264
8.18. Estimating Transactions, Revaluations, and OCVA for Shares and Other Equity. . . . .	266
8.19. Reliability of Data Estimates . . . . .	269
A1.1. Sectoral Balance Sheet for Central Bank. . . . .	272
A1.2. Sectoral Balance Sheet for Other Depository Corporations. . . . .	279
A1.3. Sectoral Balance Sheet for Other Financial Corporations . . . . .	286
Report Form 1SR for the Central Bank. . . . .	303
Report Form 2SR for Other Depository Corporations . . . . .	316
Report Form 4SR for Other Financial Corporations. . . . .	328
Report Form 5SR for Monetary Aggregates . . . . .	338

# Foreword

The global need for monetary and financial statistics that are accurate, comprehensive, comparable across countries, and widely available on a timely basis has been underscored by modern episodes of instability in financial markets, ranging from the Asian debt crisis of the 1990s to the recent stresses in loan and securities markets in the world's most sophisticated financial centers. The *Monetary and Financial Statistics: Compilation Guide* (the *Guide*)—an accompaniment to the *Monetary and Financial Statistics Manual* (the *Manual*)—is a significant component of the IMF work on enhancing the quality, availability, and analytical usefulness of financial-sector data in both in-country and international contexts.

The *Guide* focuses on the cross-country harmonization of source data and methodology for the compilation and presentation of the statistics. It also describes the unified framework for countries' reporting of monetary data to the IMF. In 2004, the IMF introduced the Standardized Report Forms (SRFs), which are based on the methodology in the *Manual* and are designed for countries' reporting of balance-sheet data for their depository corporations, insurance corporations, pension funds, and other institutional types of financial corporations.

Thus far, more than 80 member countries have established monthly reporting of SRF-type data, and time series from these data are published in the IMF's quarterly *International Financial Statistics: Supplement on Monetary and Financial Statistics*. Implementation of the reporting by most IMF member countries will be completed in 2008. Shortly thereafter, a new presentation of the SRF-based data will be introduced in the monthly *International Financial Statistics*, and the methodology of the *Manual* and *Guide* will have been fully integrated into the core sets of monetary data published by the IMF.

Implementation of the methodology in the *Manual* and *Guide* is integrally linked to other initiatives in the IMF's Statistics Department, including (1) establishment of the *Special Data Dissemination Standard* and the *General Data Dissemination System* for guidance on countries' dissemination of their macroeconomic statistics and (2) development of financial-sector data for prudential purposes, as contained in the IMF's *Financial Soundness Indicators: Compilation Guide*. Finally, the monetary and financial statistics reported by the countries are core components of the data required for the IMF's balance-sheet approach to debt vulnerabilities in and across countries.

I commend this *Guide* to member countries in the expectation that it will prove helpful in the compilation of monetary and financial statistics that are of high quality.

Dominique Strauss-Kahn  
Managing Director  
International Monetary Fund





# Preface

The *Monetary and Financial Statistics: Compilation Guide* (the *Guide*) has been designed to accompany the *Monetary and Financial Statistics Manual* (the *Manual*), which was published by the International Monetary Fund in 2000. The *Manual* set forth the broad frameworks for the collection, compilation, and presentation of monetary and financial statistics. The *Guide* is a lengthier volume that contains more detailed coverage of the classification, economic sectorization, valuation, and recording of the various categories of financial assets and liabilities in an economy. The concepts, accounting principles, and other methodological elements of the *Manual* and the *Guide* are harmonized with those of the *System of National Accounts 1993*.

In addition to deeper coverage of numerous topics in the *Manual*, the *Guide* gives prominence to the source data for the monetary and financial statistics. For the monetary statistics, the principal data sources are the accounting records for stocks and flows in the financial corporations sector. For the financial statistics, the source data are broadened to include stock and flow data for all government and nongovernment units in all sectors of an economy. The *Manual* and the *Guide* need to be viewed as providing guidance and recommendations, rather than prescribing standards that necessarily apply to every country in all circumstances. Recognition is given to the fact that institutional arrangements, as well as national financial reporting standards, may differ across countries.

To promote cross-country consistency of source data for the monetary and financial statistics, the *Guide* is keyed to the International Financial Reporting Standards, which many countries have adopted as national financial reporting standards. This approach is viewed as supporting a basic objective of the *Manual* and the *Guide*—to provide guidance on collection, compilation, reporting, and other forms of dissemination of monetary and financial statistics that are consistent around the world.

The *Guide* was prepared in the Financial Institutions Division I of the IMF's Statistics Department under the supervision of Edgar Ayales. Randall Merris drafted Chapters 1–2 and Chapters 4–7 and was responsible for the management of the drafting from inception to completion. Jose Maria Cartas drafted Chapter 3, and Satoru Hagino and Jose Carlos Moreno-Ramírez drafted Chapter 8. Meshack Tjirongo contributed to Chapter 6, and Gary Barendshtein, Jaroslav Kučera, Marco Martínez, and Roman Skarzynski contributed to the numerical examples in Chapter 7 and Appendix I and to the Standardized Report Forms in Appendix II. The draft *Guide* was edited by James McEuen and Rebecca Obstler in the IMF's External Relations Department. Mabel Hollstein word-processed the revisions.

The *Guide* has benefited from the comments of numerous officials in the member countries, ranging from those provided at the formative stage—in particular, during Statistics Department staff visits to the Bank of England, European Central Bank, and Reserve Bank of South Africa—to those on the complete draft. A meeting to discuss the draft *Guide* was held at the IMF in December 2005. The IMF staff wishes to thank the following regional and national experts who participated in the meeting:

Argentina	Mrs. Beatriz Biasone
Bolivia	Ms. Maria Teresa Vera Paz
Brazil	Mr. Virgilio Silva Chevalier
Canada	Mr. Patrick O'Hagan
Canada	Mr. Joe Wilkinson
China	Mr. Li Hailong
Czech Republic	Ms. Magda Gregorova
Finland	Mr. Eero Savolainen
France	Ms. Regine Monfront-Moncomble
Germany	Mr. Stefan Brunken
India	Mr. Muneesh Kapur
Iran, Islamic Republic of	Mr. Assadollah Monajemi
Italy	Mr. Gianmatteocarolo Piazza
Korea, Republic of	Mr. Yu Seong Jeong
Kuwait	Mr. Sadeq J Al-Mutawa
Norway	Mr. Vetle Hvidsten
Russian Federation	Mrs. Nadezhda Ivanova
Saudi Arabia	Dr. Ahmad Alkholifey
Saudi Arabia	Mr. Hassan Alshehri
Tanzania	Mr. Johnson Jossia Nyella
Thailand	Ms. Nitidao Ratanapaitoon
United Kingdom	Mr. Chris B. Wright
United States	Ms. Susan Hume McIntosh
AfDB	Mr. Andre Cyprien Portella
BEAC	Mr. Simplicie Duclaire Lonkeng
BCEAO	Mr. Antonin S. Dossou
BIS	Mr. Paul Van Den Bergh
CEMLA	Mr. Edwin Rivera
ECB	Mr. Patrick Sandars
ECB	Mr. Michel Stubbe
ECCB	Ms. Gale Archibald
ECCB	Ms. Leah Sahely
IDB	Mr. Fernando Fernandez
IMF Consultant	Mrs. Carol Carson
IMF Consultant	Mr. Kevin O'Connor
OECD	Ms. Anne Harrison
World Bank	Mr. Ibrahim Levent

Special acknowledgment is accorded to Chris Wright, Bank of England, for his extensive comments following the December 2005 meeting.

In addition to this English language version, the *Guide* will also be published in Arabic, Chinese, French, Russian, and Spanish.

Robert W. Edwards  
 Director  
 Statistics Department  
 International Monetary Fund

# Abbreviations

ADR	American depository receipt
AfDB	African Development Bank
AMC	Asset management company
BA	Banker's acceptance
BCEAO	Central Bank of West African States
BIS	Bank for International Settlements
BEAC	Bank of Central African States
BOE	Bank of England
BOT	Build-operate-transfer
<i>BPM5</i>	<i>Balance of Payments Manual</i> , 5th edition (IMF, 1993)
CAPM	Capital asset pricing model
CAR	Collateralized automobile receivable
CBA	Cost-benefit analysis
<i>CBS</i>	<i>Central Bank Survey</i>
CDO	Collateralized debt obligation
CEMLA	Center for Latin American Monetary Studies
CMA	Common Market Area
CMIR	Currency and monetary instrument report
CMO	Collateralized mortgage obligation
CO	Coupon only
COP	Call-option payoff
CS	Closing stock
DC	Depository corporation
<i>DCS</i>	<i>Depository Corporations Survey</i>
DDM	Dividend discount model
DQAF	Data Quality Assessment Framework
DR	Depository receipt
DSBB	Dissemination Standards Bulletin Board (IMF)
ECB	European Central Bank
ECCB	Eastern Caribbean Central Bank
ECCU	Eastern Caribbean Currency Union
EMU	Economic and Monetary Union (EU)
<i>ESA</i>	<i>European System of Accounts</i> (Eurostat, 1996)
EU	European Union
FC	Financial corporation
<i>FCS</i>	<i>Financial Corporations Survey</i>
FRA	Forward-rate agreement
FRN	Floating-rate note
FSI	Financial soundness indicator
GDDS	General Data Dissemination System (IMF)
GDP	Gross domestic product
GDR	Global depository receipt
<i>GFSM 2001</i>	<i>Government Finance Statistics Manual 2001</i> (IMF, 2001)
IAS	International Accounting Standard

## Abbreviations

IASB	International Accounting Standards Board
IDB	Inter-American Development Bank
IFAC	International Federation of Accountants
IFRS	International Financial Reporting Standard
<i>IFS</i>	<i>International Financial Statistics</i> (IMF)
IIP	International investment position
IPSAS	International Public Sector Accounting Standard
IO	Interest only
L/C	Letter of credit
LEAPS	Long-term equity anticipation security
LIBOR	London interbank offered rate
MBB	Mortgage-backed bond
MCM	Market capitalization method
<i>MFSM</i>	<i>Monetary and Financial Statistics Manual</i> (IMF, 2006b)
MMMF	Money market mutual fund
NATO	North Atlantic Treaty Organization
NAV	Net asset value
NCB	National central bank
NGV	No-growth value
NPI	Nonprofit institution
NPISH	Nonprofit institutions serving households
NPL	Nonperforming loan
OCVA	Other changes in the volume of assets
ODC	Other depository corporation
<i>ODCS</i>	<i>Other Depository Corporations Survey</i>
OFC	Other financial corporation
<i>OFCS</i>	<i>Other Financial Corporations Survey</i>
OS	Opening stock
PO	Principal only
POP	Put-option payoff
PPP	Public-private partnership
PSA	Public Securities Association
PVGO	Present value of growth opportunities
RCB	Regional central bank
REIT	Real estate investment trust
SDDS	Special Data Dissemination Standard (IMF)
SDR	Special drawing right (IMF)
SPE	Special purpose entity
SPI	Share price index
SRF	Standardized report form
<i>1993 SNA</i>	<i>System of National Accounts 1993</i> (Commission of the European Communities, IMF, and others, 1993)
UN	United Nations
VAT	Value-added tax
VC	Valuation change

# I. Overview

## Introduction

**1.1** *The Monetary and Financial Statistics: Compilation Guide* is aimed at providing direct assistance to data compilers who are responsible at the national level for implementing the methodology and statistical frameworks contained in the *Monetary and Financial Statistics Manual (MFSM; IMF, 2000b)*. This *Guide*, like the *MFSM*, should also be useful to compilers working in other areas of macroeconomic statistics, as well to those users who are interested in the origins and computational elements of the monetary and financial data that they are analyzing.

**1.2** The titles and topical coverage of Chapters 3–8 of the *Guide* correspond to those of Chapters III–XIII in the *MFSM*. Chapter 2 of the *Guide*, which deals with source data and the accounting standards applicable to these data, has no counterpart in the *MFSM*, given the broad scope of the *MFSM*—definitions and related concepts, major data classifications, general accounting rules, and statistical frameworks for the monetary and financial statistics. This *Guide* delves into the practical issues associated with the application of the *MFSM* principles to institutional units, individually and collectively, in a national context.

**1.3** The *Guide* contains an assortment of main text, boxes, tables, annexes, and appendixes. In addition, passages of text from the *MFSM* are shown as shaded text in various sections throughout the *Guide* (for an example, see paragraph 1.8). In some cases, the *MFSM* text has been corrected or revised for clarification. A complete list of the *MFSM* revisions is provided in the annex to this chapter (Annex 1.1).

## Historical Perspective

**1.4** By incorporating the compilation of flow data, the *MFSM* and this *Guide* take a major step in the progression of the guidance on monetary statistics that the IMF has been providing to member (and nonmember) countries for over a half century. This guidance began

in the lead-up to the publication of the inaugural issue of *International Financial Statistics (IFS)* in January 1948 and has continued to the present day.<sup>1</sup>

**1.5** The focus historically has been on compilation and reporting of balance-sheet data (end-of-month stocks) for the central bank and other depository corporations in each country. Expertise accumulated over three and a half decades of IMF technical assistance in monetary statistics was documented in *A Guide to Money and Banking Statistics in International Financial Statistics* (December 1984)—a draft manual that, though widely circulated to IMF member countries, was not officially published. The scope of the 1984 guide was limited exclusively to the compilation of stock data for depository corporations (called “banks and bank-like institutions” therein) as reported for the country pages in *IFS*.

**1.6** The *MFSM* and this *Guide* in particular contain substantial amounts of material on the compilation of flow data and related issues. The emphasis on flow data may appear to be, but is not, incongruous with the continuing focus on the reporting of stock data for the monetary statistics. A major step in the implementation of the methodology in the *MFSM* and this *Guide* has been the introduction of standardized report forms (SRFs) for countries’ transmittal of monetary data for publication in *IFS* and for operational purposes of the IMF. The SRFs are designed for reporting of stock data only.

**1.7** The *MFSM* and this *Guide* are forward-looking with respect to realistic prospects for the development and use of flow data. In explaining its exclusion of flow data, the 1984 draft guide stated:

<sup>1</sup>Public release of the January 1948 issue followed the production of six pilot issues that were distributed only within the IMF. The first pilot issue (June 1947) contained pages for 33 countries. The January 1948 issue contained pages for 56 countries. The December 2005 issue of *IFS* contained 180 country pages, as well as pages for 3 currency unions.

This reflects the fact that most of the quantitative aspects of bank supervision and regulation are based on data from balance sheets and similar financial statements. . . . while changes in stock data provide approximate measures of financial flows, flow data cannot be used to compile stock data. While valuation adjustments can be significant for some of the asset and liability items entering into the balance sheets of financial institutions, such adjustments are likely to be comparatively small overall, particularly over short periods.

This statement may have been broadly applicable in the mid-1980s but certainly has become outdated. During that era, most assets and liabilities were recorded at book value (amortized or unamortized historical cost), and the only monetary statistics recommendations for revaluation pertained to conversion of foreign-currency-denominated assets and liabilities into national currency units at end-of-period market exchange rates. Users of the monetary data, who possessed only period-to-period changes in stock data, were compelled to rely on their judgment or relatively unsophisticated quantitative methods for estimating the separate flow components—transactions and valuation changes—for the foreign-currency-denominated instruments.

**1.8** The situation changed dramatically with the introduction of the *System of National Accounts 1993 (1993 SNA; Commission of the European Communities and others, 1993)*, which recommended that revaluations should be based on current market prices or estimated market prices (fair values) for several types of financial assets and liabilities. This methodological change paralleled the accounting profession's drive, since the late 1960s, to move to market-or-fair-value accounting. Today, the results of these efforts are reflected in national accounting standards and, in particular, in the International Financial Reporting Standards (IFRSs).

It is possible to realize resource savings by treating the compilation of the financial statistics and the financial account of the *1993 SNA* as a single process or, at least, a highly cooperative effort of the compilers of the monetary and the national accounts statistics. (*MFSM*, ¶20)

**1.9** Development of flow data for the monetary statistics should produce short-term as well as longer-term benefits. Though reporting and publication of flow data for the monetary statistics are projects for

the future, the most direct and immediate benefit from the development of flow data is the usability of these data for the financial statistics.

## Relationship to the 1993 SNA and Its Update

Because of the integral links between the monetary and financial statistics and the financial account of the *1993 SNA*, there is an almost complete concordance between this manual and the *1993 SNA* with respect to principles and concepts. In particular, these two sets of international guidelines are consistent on such issues as the delineation of resident and nonresident entities, sectorization of the economy, classification of the various categories of financial assets and liabilities, time of recording of transactions and other flows, financial asset and liability valuation, and data aggregation and consolidation. (*MFSM*, ¶23)

Because of its broader scope, the *1993 SNA* contains many principles and concepts not directly relevant to this manual. This manual contains a few concepts not found in the *1993 SNA*, as well as more detailed treatment of some concepts contained therein. (*MFSM*, ¶24)

**1.10** Differences between the *1993 SNA* methodology and that of the *MFSM* and this *Guide*, though few in number, are noteworthy. As regards the delineation of *institutional units and sectors*, the differences are:

- *Other resident sectors.* The *1993 SNA* (¶4.6) specifies separate subsectors for *Households* and *Non-profit institutions serving households* (NPISHs), whereas the monetary statistics methodology combines the household and NPISH subsectors in the single category of *Other resident sectors*.
- *Other nonfinancial corporations.* In the *1993 SNA* (¶4.71), the nonfinancial corporations sector is divided into three subsectors: (1) *Public nonfinancial corporations*, (2) *National private nonfinancial corporations*, and (3) *Foreign controlled nonfinancial corporations*. In the methodology for the monetary statistics, only two categories are specified—*Public nonfinancial corporations* and *Other nonfinancial corporations*—given that sectoral classification on the basis of residency of those who control a corporation is not relevant for the monetary statistics.
- *Other financial corporations.* The *1993 SNA* (¶4.83) specifies separate financial corporation

subsectors for (1) *Other financial intermediaries, except insurance corporations and pension funds*; (2) *Financial auxiliaries*; and (3) *Insurance corporations and pension funds*. These subsectors are recognized in the *MFSM* and this *Guide*, but they are combined to form the *Other financial corporations* subsector in all data compilations and presentations of the standard sets of monetary statistics.

- *Government entities that supervise financial corporations*. These supervisory agencies are placed in the *Central bank* subsector in the *1993 SNA* (§4.86), whereas they are included in the *Financial auxiliaries* subsector in the *MFSM* and this *Guide*.
- *Other depository corporations*. In the monetary statistics methodology, all financial corporations that issue liabilities included in broad money are designated as *Depository corporations*. These include the *Central bank* subsector and the *Other depository corporations* subsector. In the *1993 SNA* (§4.88), other depository corporations are defined as those “. . . which have liabilities in the form of deposits or financial instruments such as short-term certificates of deposit which are close substitutes for deposits in mobilizing financial resources and which are included in measures of money broadly defined.” The subtle distinction is that, in the *1993 SNA*, the delineation of an other depository corporation is not based on a single construct of *Broad money* as defined by the national authorities.
- *Regional central banks*. In the *1993 SNA* (§14.34), a regional central bank that is the headquarters for a currency union or monetary union is not treated as a separate institutional unit, and its transactions and balance-sheet positions are apportioned among the member countries in the union. In the monetary statistics methodology, the *1993 SNA* treatment may apply or, depending on the characteristics of the monetary/currency union, the regional central bank may be delineated as a separate institutional unit whose transactions and balance-sheet positions are treated akin to those of an international organization.
- *Reinsurance corporations*. The *1993 SNA* states (Annex IV, §28): “Reinsurance transactions between resident insurance corporations should be consolidated . . . without regard to the division within the industry between direct insurance and reinsurance.” The methodology in this *Guide* does not call for such consolidation. Reinsurance corporations are recognized as separate institutional units, and their transactions and balance-sheet

positions are treated in the same manner as those of direct insurance corporations.

**1.11** The major categories for financial assets and liabilities in the monetary statistics agree with those in the *1993 SNA*—that is, *Monetary gold and SDRs*; *Currency and deposits*; *Securities other than shares*; *Loans*; *Shares and other equity*; *Insurance technical reserves*; *Financial derivatives*;<sup>2</sup> and *Other accounts receivable/payable*. Regarding the classification of financial assets, the differences are:

- *Classification by maturity*. In the *1993 SNA* (§11.80–11.81 and §11.84–85), *Loans* and *Securities other than shares* are divided, at a secondary level of classification, into separate categories for *short-term instruments* (original maturity of one year or less) and *long-term instruments*. The standard components of the monetary statistics do not include loans and securities other than shares classified by maturity.<sup>3</sup>
- *Classification by currency of denomination*. The *1993 SNA* does not include a secondary-level division of financial assets into subcategories for financial assets and liabilities (1) denominated in national currency and (2) denominated in foreign currency. In the *MFSM* and this *Guide*, the categorization by currency of denomination is applied to currency and deposits on the asset side of the sectoral balance sheet and to deposits and securities other than shares on the liability side.<sup>4</sup>
- *Classification of monetary gold and SDRs*. In the *1993 SNA*, *Monetary gold and SDRs* is a single category for which a secondary level of classification as monetary gold and SDRs, respectively, is absent. *Monetary gold and SDRs* is also a major financial asset category in the monetary statistics, but *Monetary gold* and *SDRs* are shown as separate categories in the presentations of central bank accounts in the sectoral balance sheet and the *Central Bank Survey (CBS)*.

<sup>2</sup>In the *1993 SNA* (§11.82) as originally published, financial derivatives were classified within *Securities other than shares*, either indistinguishably or as a separate subcategory. In the *Updates and Amendments to the SNA 1993 (2004)*, *Financial derivatives* became a separate major category of financial assets.

<sup>3</sup>However, this *Guide* recommends that data on short- and long-term subcategories of deposits, loans, and securities other than shares be compiled on a supplementary basis. See the *Supplementary Data* section in Chapter 7.

<sup>4</sup>However, disaggregation by currency of denomination for loans, securities other than shares, shares and other equity, and financial derivatives in the context of the SRFs (see Chapter 6), if possible, is recommended in this *Guide*.



- *Definition of trade credit.* In the 1993 SNA (§11.100), trade credit is classified within *Other accounts receivable/payable* and it is indicated that “Trade credits and advances do not include loans to finance trade credit, which are classified under [*Loans*]. . .” This *Guide* distinguishes between trade credits and loans by specifying that trade credits are non-interest-bearing and that loans are interest-bearing.
- *Reclassification of impaired financial assets.* In this *Guide*, impaired deposits and, in some cases, impaired securities other than shares are reclassified as loans (to facilitate the posting of provisions for loan losses for these instruments). This reclassification rule is not contained in the 1993 SNA.

**1.12** The valuation principles and other accounting rules in the *MFSM* and this *Guide* are in general agreement with those in the 1993 SNA. A major exception for the monetary statistics is the valuation of shares and other equity on the liability side of the sectoral balance sheets of financial corporations. For the monetary statistics, components of the *Shares and other equity account* are measured at book value.<sup>5</sup> In the 1993 SNA methodology (including for the financial statistics), the *Shares and other equity account* is valued at the market or fair value of the shares.<sup>6</sup>

**1.13** The 1993 SNA methodology does not delve into specific definitions of monetary aggregates. The *MFSM* and this *Guide* focus on the monetary aggregate that is designated as *broad money* in the national context. Monetary aggregates that are defined more narrowly are covered to a limited extent. *Monetary base*—a major liability category in the *CBS* in the monetary statistics—is another construct not used in the 1993 SNA.

**1.14** An update of the 1993 SNA will be published as the 1993 SNA, *Rev. 1*. The extensive collaborative efforts of specialists in national accounts statistics from many countries have led to the identification of

<sup>5</sup>The concept of book value is explained in the *Terminology* subsection of Chapter 2 of this *Guide*.

<sup>6</sup>In the 1993 SNA (§13.82), net worth is defined as the difference between the value of all assets and all liabilities (including shares and other equity) in an institutional unit’s balance sheet at a particular moment in time. In the SNA context, net worth can be positive, negative, or zero. In the methodology of the monetary statistics, net worth is always equal to zero, because of the valuation of shares and other equity at book value. Net worth is equal to the market value less the book value of the liability account for *Shares and other equity*.

several methodological revisions that will appear in the 1993 SNA, *Rev. 1* and that have been integrated into the methodology in this *Guide*. These new features are:

- *Unallocated gold deposits.* Deposit claims on gold (as opposed to title claims on physical gold) are classified within *Deposits* in this *Guide*. This type of deposit is not specifically covered in the 1993 SNA or the *MFSM*.
- *Valuation of unquoted equity shares.* Alternatives for determining the fair value of equity shares that are not traded in active markets have been expanded beyond the *market-capitalization method* and *present-value method* recommended in the 1993 SNA and the *MFSM*. The preferred approach is the use of transaction price data for the equity shares. In the absence of transaction price data, the valuation can be based on (1) a previously recommended method, (2) the *net-asset-value method*, or (3) *own funds at book value* (least preferred method).
- *Employee stock options.* This *Guide* describes the valuation and recording of employee stock options, which are classified as a separate subcategory of options contracts within the liability account for *Financial derivatives*. Employee stock options were not explicitly covered in the 1993 SNA or the *MFSM*.
- *Unfunded pension liabilities.* This *Guide*, unlike the 1993 SNA and the *MFSM*, recommends that estimates of unfunded pension liabilities be included in the balance sheets of financial corporations that are employers liable for future pension payments that are not currently funded. The fair value of unfunded liabilities is based on actuarial principles of accounting.

## Relationships Among Macroeconomic Statistical Systems

**1.15** Macroeconomic statistics manuals and guides published by the IMF, or jointly with other international organizations, are listed in Box 1.1. The core components of the statistical methodology for macroeconomic analysis are the 1993 SNA, *MFSM* (2000), *BPM5* (1993), and *GFSM* (2001)—complemented by the more specialized methodologies in the manuals and guides on external debt, international reserves and foreign currency liquidity, foreign direct investment, and portfolio investment in the international context.

**Box I.1. Macroeconomic Statistics at the IMF: Other Manuals and Guides<sup>1</sup>****National accounts statistics**

*System of National Accounts 1993* (1993); *Updates and Amendments to the System of National Accounts 1993* (2004); and *System of National Accounts 1993, Rev. 1* (forthcoming).<sup>2</sup>

*Quarterly National Accounts Manual: Concepts, Data Sources, and Compilation* (2001).<sup>3</sup>

**Balance of payments, international investment, international reserve and foreign currency liquidity, and external debt statistics**

*Balance of Payments Manual*, fifth edition (BPM5, 1993); sixth edition is forthcoming.

*Balance of Payments Compilation Guide* (1995).

*Balance of Payments Textbook* (1996).

*Financial Derivatives: Supplement to the Fifth Edition (1993) of the Balance of Payments Manual* (2000).

*International Reserves and Foreign Currency Liquidity: Guidelines for a Data Template* (2001).<sup>4</sup>

*Coordinated Portfolio Investment Survey Guide*, second edition (2002).

<sup>1</sup>IMF publication alone unless otherwise indicated. Full citations are in *References* at the end of this *Guide*.

<sup>2</sup>Commission of the European Communities, IMF, Organization for Economic Cooperation and Development, United Nations, and World Bank.

<sup>3</sup>By Adriaan M. Bloem, Robert J. Dippelsman, and Nils O. Maehle.

<sup>4</sup>By Anne Y. Kester.

*Foreign Direct Investment Statistics: How Countries Measure FDI 2001* (2003).<sup>5</sup>

*External Debt Statistics: Guide for Compilers and Users* (2003).<sup>6</sup>

**Government finance statistics**

*Government Finance Statistics Manual 2001 (GFSM, 2001)*.

**Financial soundness statistics**

*Financial Soundness Indicators: Compilation Guide* (2006).

**Price statistics**

*Producer Price Index Manual: Theory and Practice* (2004).<sup>7</sup>

*Consumer Price Index Manual: Theory and Practice* (2004).<sup>8</sup>

*Export and Import Price Index Manual* (draft; forthcoming, 2007).

<sup>5</sup>International Monetary Fund and Organization for Economic Cooperation and Development.

<sup>6</sup>Bank for International Settlements, Commonwealth Secretariat, Eurostat, International Monetary Fund, Organization for Economic Cooperation and Development, Paris Club Secretariat, United Nations Conference on Trade and Development, and World Bank.

<sup>7</sup>International Labor Organization, International Monetary Fund, Organization for Economic Cooperation and Development, United Nations Economic Commission for Europe, and World Bank.

<sup>8</sup>International Labor Office, International Monetary Fund, Organization for Economic Cooperation and Development, Statistical Office of the European Communities (Eurostat), United Nations, and World Bank.

**1.16** The evolution toward greater consistency of the methodologies for the national accounts, monetary, balance of payments, and government finance statistics began with release of the *1993 SNA* and the *BPM5* (1993) and was reinforced by publication of the *MFSM* (2000) and the *GFSM* (2001). The evolution is continuing, with plans for the publication of the *1993 SNA, Rev. 1* and the *Balance of Payments and International Investment Position Manual*, sixth edition (*BPM6*).<sup>7</sup>

**1.17** Methodological consistency among the macroeconomic statistics has benefits for both the users of the statistics—the policymakers and macroeconomic analysts who study the linkages among the domestic real sector, financial sector, external sector, and fiscal (central government) sector of the economy—

<sup>7</sup>Plans are under way to update the *MFSM* and this *Guide* at the same time as, or shortly after, the release of *1993 SNA, Rev. 1* and the *BPM6*.

and those who are responsible for the collection and compilation of the statistics.<sup>8</sup>

**1.18** Data consistency often implies that the same data set appears in two or more of the macroeconomic statistical systems with the same nomenclature. In this *Guide*, data consistency is based on the concept of reconcilability of data across macroeconomic statistical systems. The macroeconomic systems share many concepts and accounting rules, but each system has some nomenclature and concepts that are unique to the particular macroeconomic area, or are more prominent than in other macroeconomic sys-

<sup>8</sup>An overview of linkages among the monetary statistics and the balance of payments and government finance statistics is presented in the *MFSM*, ¶367–78. In the *Depository Corporations Survey (DCS)*, broad linkages to the balance of payments statistics are changes in (1) *Claims on nonresidents* and (2) *Liabilities to nonresidents*. In the *DCS*, broad linkages to the government finance statistics are changes in (1) *Claims on central government* and (2) *Liabilities to central government*.

tems. Data sets in two macroeconomic systems are designated as *consistent* if the data are reconcilable, meaning that (1) the data are the same (to a reasonable level of accuracy); (2) data discrepancies can be explained and justified (subject to elimination of the discrepancies, if possible);<sup>9</sup> or (3) the data in one system can be constructed from “building blocks” of data from another system.

**1.19** The monetary statistics provide source data for elements of other macroeconomic systems. The most obvious case is the use of monetary statistics as source data for the financial statistics, but the monetary statistics can also provide some data inputs for other systems—for example, for the financial account of the balance of payments, the international investment position (IIP), the external debt statistics, and the data template for international reserves and foreign currency liquidity.

**1.20** The source data for the monetary statistics are obtained from the accounting and other information systems of financial corporations. The other macroeconomic systems also obtain source data from the financial corporations’ records, as well as from many other sources. This *Guide* recommends that *the data reporting be as unified as possible to avoid duplication of reporting requirements for the various types of macroeconomic data provided by the financial corporations and institutional units in other sectors of the economy*.<sup>10</sup> The methodology of the other macroeconomic systems, like that in the *MFSM*, specifies that several major categories of financial assets and liabilities should be measured at market or fair value (an approximation of market value). Introduction of the market-value rule ushers in a new era of application of estimation methods for source data for the macroeconomic statistics.

**1.21** Similarly, each major macroeconomic statistics framework contains both stock data and flow data

<sup>9</sup>For example, suppose the other depository corporation (ODC) data for deposit liabilities to the central government differ from the central government’s records for these deposits. If time of recording of deposit transactions (on a delayed basis by the government) was identified as the source of the discrepancy, the data would be reconciled. The appropriate action would be a revision in the government’s procedures for posting deposit transactions or, if such revision is not feasible, to choose the ODC data as the preferred source.

<sup>10</sup>See the *Systematic identification of data reporting requirements* subsection in Chapter 2, which deals with assessment of the benefits and costs of macroeconomic data reporting.

(that is, data on transactions, valuation changes, and other flows) that often must be estimated. A strong case for data sharing across macroeconomic statistical systems is not new, but the rationale for data sharing and cooperative efforts among the compilers of the macroeconomic statistics is bolstered substantially by recognition of the joint need for estimated data on market values and flow data for the same or similar categories of financial assets and liabilities.

## Overview of Chapter Contents

### Chapter 2. Source Data for Monetary and Financial Statistics

**1.22** This chapter describes the linkages between the accounting data—the stock and flow data in an institutional unit’s information system—and the source data reported to compilers of the monetary and financial statistics. The source data for the monetary statistics are based on the accounting records of the financial corporations. The data in the accounting ledgers of these units are structured in accordance with national laws or regulations that constitute the *national financial reporting standards* of a country. This chapter focuses on the IFRSs in describing the relationships between national financial reporting standards and the statistical methodology of the monetary and financial statistics. Special attention is given to the double-entry accounting for stock and flow data. This chapter also contains recommendations for the periodicity (frequency) of the compilation and reporting of monetary and financial statistics.

**1.23** Chapter 2 also deals with policy concerns and practical issues associated with the costly nature of source data reporting for the monetary statistics, particularly for small financial corporations. Identification of source data reporting requirements is covered from a cost/benefit perspective, and the use of data estimation is described. Validation and plausibility testing of reported data are also described.

### Chapter 3. Institutional Units and Sectors

**1.24** This chapter builds on the methodology in Chapter III of the *MFSM*, which in turn is based on 1993 SNA principles for delineating an economy (economic territory), identifying and sectorizing the institutional units within an economy, and distinguishing between these institutional units

and nonresidents. Chapter 3 of this *Guide* extends the description of institutional units and provides examples of “gray areas,” or borderline cases, that arise in separating resident units from nonresidents. Particular attention is devoted to the sectorization of institutional units within the financial corporations sector, which gives rise to special issues concerning the treatment of currency unions and regional central banks, bank supervisory agencies, asset management companies, pension funds, and special purpose entities (SPEs).

#### Chapter 4. Classification of Financial Assets

**1.25** This chapter provides more detailed descriptions of the characteristics of subcategories of financial assets and liabilities within the major categories covered in the *MFSM*, Chapter IV. In elaborating on the underlying characteristics of various types of financial assets and liabilities, the chapter provides guidance for distinguishing between (1) deposits and loans, (2) loans and securities other than shares, and (3) loans and trade credit. Chapter 4 contains relatively detailed descriptions of the financial assets and liabilities within three major categories—insurance technical reserves, financial derivatives, and other accounts receivable/payable—as well as those within the categories of deposits, loans, securities other than shares, and shares and other equity.

#### Chapter 5. Stocks, Flows, and Accounting Rules

**1.26** This chapter describes the compilation of stock and flow data for institutional units within the financial corporations sector. The first major section provides an overview of the stock-and-flow data framework in which double-entry accounting rules give rise to both vertical and horizontal adding-up requirements for the data. The stock of each category of financial asset or liability at the end of a reporting period is specified as the opening stock *plus* flows in the form of transactions, valuation changes, and other changes in the volume of assets during the period.

**1.27** The second major section covers stocks and flows by asset classification: the initial valuation and subsequent revaluation of the various categories of financial assets and liabilities described in Chapter 4, and the recording of transactions, revaluations, and other flows for each category or subcategory of financial assets and liabilities. The third major

section covers other accounting issues. Special attention is devoted to topics pertaining to nonperforming financial assets (especially, nonperforming loans), including the use of provisions (allowances) for losses on impaired financial assets, estimation of expected losses on impaired financial assets (and realizable values of impaired assets), and accounting for interest arrears (interest overdue for payment).

#### Chapter 6. Money, Credit, and Debt

**1.28** The chapter covers a variety of issues pertaining to collection and reporting of data for broad money and other monetary aggregates, the monetary base within the CBS, and credit and debt aggregates. Topics include several issues associated with the circulation of national currency, the use of foreign currency that functions as a medium of exchange and/or a national unit of account in some countries, and deposit components of broad money (which may include electronic money). Special attention is devoted to the reporting of monetary data for financial corporations that are closed while awaiting liquidation or reorganization. The last major section in the chapter describes the methodology for seasonal adjustment of economic time series, emphasizing the estimation of seasonally adjusted monetary aggregates.

#### Chapter 7. The Framework for Monetary Statistics

**1.29** Major topics covered in this chapter are (1) reporting of financial corporations’ data, (2) compilation of sectoral balance sheets and surveys for the financial corporations sector, (3) country reporting of monetary data to the IMF, and (4) dissemination of a country’s monetary data—directly by the national authorities and through IMF publication of country data in *IFS*.

**1.30** An extensive set of numerical examples of sectoral balance sheets and surveys of the financial corporations sector are contained in Annexes 7.1–7.4 of Chapter 7. These examples are revised and extended versions of the illustrative sectoral balance sheets and surveys in the *MFSM* (Appendix 3, Tables 1–3; and Chapter VII, Tables 7.2–7.6). Major extensions include descriptions and numerical examples of other changes in the volume of assets (OCVA) and illustrations of consolidation adjustments for compilation of the surveys of the financial corporations sector.

1.31 Annex 7.5 of Chapter 7 introduces an illustrative set of supplementary data that are disaggregated categories of sectoral balance-sheet accounts of the central bank, other depository corporations, and other financial corporations. The financial assets and liabilities presented in Annex 7.5 are disaggregated by maturity (short- or long-term), currency of denomination (national or foreign currency), and type of interest rate (fixed or variable rate). The supplementary data include subcategories for financial derivatives by type of contract—balance-sheet data for financial derivatives and amounts of notional principal specified in the contracts, as recorded outside the balance sheet.

### Chapter 8. Financial Statistics

1.32 This chapter describes a systematic approach to the development of a country's financial statistics. Progressively more sophisticated frameworks are specified in terms of three levels of financial statistics: (1) basic flow-of-funds accounts, (2) an SNA integrated financial account and corresponding balance sheet, and (3) detailed financial statistics. Chapter 8 covers the presentation of financial statistics in both matrix and time-series format, collection of the source data, and compilation procedures that include the editing of the data, estimation of missing data, calculation of data for residual cells in the matrices, and accounting for data discrepancies. Though emphasizing the transaction data in a flow-of-funds context, the chapter also covers the compilation of other categories of flow data—revaluations and other changes in the volume of assets—and stock data for the balance sheet of an entire economy.

### Annex I.1. Revisions to the Monetary and Financial Statistics Manual, 2000

1.33 The symbol ¶ denotes a paragraph in the *MFSM*. Additions to the text are indicated in bold; deletions are not indicated.

#### Chapter II

¶40. Should read: “The valuation of loans **and deposits** is an exception to the valuation principle based on market price or fair value. In particular, loan **and deposit** values should be based on creditors' outstanding claims without adjustment for expected loan **or deposit** losses.”

#### Chapter III

¶73. First bullet. Should read: “Unincorporated government enterprises engaged in market production and operating **in a similar way to publicly owned corporations.**”

¶73. Second bullet. Should read: “Unincorporated units operated by households, engaged in market production and operating as **if they were private corporations.**”

#### Chapter IV

¶125. “Some countries issue gold coins, which are held for intrinsic value, or commemorative coins, which are held for numismatic value. If not in active circulation, such coins should be classified as nonfinancial assets rather than as financial assets, **and within Other accounts payable by the seller/issuer.**”

¶126. “Central bank or central government holdings of unissued or demonetized currency are **recorded as nonfinancial assets** in the sectoral balance sheets. **Demonetized currency should be removed from the balance sheet upon disposal.**”

¶156. “This manual recommends that gold loans be treated as off-balance-sheet items (that is, not recorded as transactions). If the gold is on-sold, however, the on-selling party (that is, the gold borrower) should record a gold transaction, in like manner to gold swaps. **The gold underlying a gold loan is referred to as gold in an allocated account for which an ownership claim on physical gold exists. Gold in an unallocated account, which refers to a gold-denominated claim against a third party (not the physical gold holder), is classified as a financial asset, specifically as a deposit.**”

¶166. Fifth bullet. Should read: “*Valuation adjustment* shows the net counterpart to changes in the value of assets and liabilities on the balance sheets of financial corporations, **excluding those changes in value (that is, gains or losses) that are recorded in profit or loss for the period.**”

¶168. First sentence. Should read: “Insurance technical reserves consist of net equity of households in life insurance reserves and pension funds and prepayments of **insurance premiums and reserves** against outstanding claims.”

## Chapter V

¶184. Second sentence. Should read: “This chapter describes the methods for deriving *fair values*—approximations of market values—for assets and liabilities **that are traded on an infrequent basis.**”

¶184. Last sentence. “Other exceptions to the market valuation principle are necessary for the valuation of loans, **deposits**, and shares and other equity in the compilation of the monetary statistics.”

¶194. Fourth bullet. Last sentence on page 39 (continuing on page 40). Should read: “These events include unforeseen obsolescence of fixed assets, abandonment of production facilities before being brought into economic use, and other events that are not transactions, that should not be attributed to holding gains or losses, and that do not fall into the other categories of events requiring entries in the OCVA account.”

¶220. First bullet. “Market prices of financial assets and liabilities that are market traded but otherwise similar to the nontraded **or infrequently traded** financial assets that are being fair valued; or”

¶220. Second bullet. “Discounted present values of future cash flows from nontraded **or infrequently traded** financial assets and liabilities.”

¶223. In the formula for fair value, which is based on the present value of future cash flows, the summation operator ( $\Sigma$ ) should apply to both the numerator and denominator. The correct formula is:

$$\text{Fair value} = \sum_{t=1}^n \frac{(\text{cash flow})_t}{(1+i)^t}$$

¶231. First sentence. “One method for calculating the amount of accrued interest is relatively easy to apply, **in particular, when the security is not traded and its fair value is assumed to be constant over its life.**”

¶231. Fifth sentence. “For securities sold on a discount basis,  $F - L$  represents the total accrued interest to be distributed equally (**in terms of effective yield rather than absolute amount**) over the periods prior to maturity.”

¶231. Last sentence. Should read: “This method for calculating the amount of accrued interest is called the *debtor approach*, but it can be applied relatively

easily by both the debtor and creditor in recording the accrued interest for securities **that the creditor holds from the time of issuance to maturity—that is, for securities that are not traded.**”

¶232. Following the last sentence. “*Suppose that the market prices of the securities in succeeding months were  $P_1, P_2, P_3$ , etc. In these periods,  $F - P_1, F - P_2, F - P_3$ , etc. is viewed as the discount that is to be apportioned (on an effective yield basis) as accrued interest.*”

¶242. Last sentence. Should read: “In particular, an institutional unit consisting of a headquarters office and **resident** branch offices should report stock and flow data consolidated across all **resident** offices of the institutional unit.”

¶271. “Repayable margin payments of cash are transactions in *deposits*, not transactions in financial derivatives. A depositor has a claim on an exchange, brokerage, or other institution holding the deposit. Some countries may prefer to classify repayable margin deposits within *other accounts receivable/payable* [additional text deleted]. When a repayable margin deposit is made in a noncash asset (such as securities), no transaction is recorded, because no change in ownership has occurred.”

## Chapter VI

¶308. “This manual recommends exclusion of all deposit liabilities of nonoperating depository corporations from the monetary aggregates, **if the expectation is that depositors will not have access to the funds within the foreseeable future. These should be classified as restricted deposits (excluded from broad money), if (1) depositors are expected to receive less than the full value of the deposits or (2) the full recovery of deposit funds is expected to occur after a protracted period.** These deposits should continue to be classified as restricted deposits as long as the nonoperating units continue to exist as legal entities. Reorganization, sale, or merger of the affected depository corporations may result in all or part of the deposits eventually becoming available to depositors.”

¶313. Last sentence. Should read: “Shares in equity mutual funds and bond mutual funds may experience substantial price variability, and the sale of such shares may involve significant transactions costs and

time delays, **often** resulting in their exclusion from the monetary aggregates.”

**Box 6.2, page 65.** Third line in bold font. Should read: “Central bank **deposits** included in broad money.”

¶334. First two sentences. “Measures of **debt** have the same three dimensions as monetary aggregates. Defining **debt** measures involves specifying (1) the **liabilities** included, (2) the issuing sectors (**borrowers**), and (3) the holding sectors (**lenders**).” [The revised sentences should be moved to ¶348, first sentence.]

¶361. “The Inter-Agency Task Force on Finance Statistics (comprising representatives of certain international organizations, including the IMF) **has published** *External Debt Statistics: Guide for Compilers and Users (2003)*, **which provides** international methodological standards for the measurement of external debt, as well as guidance on the analytical use of the data and on the sources and methods for their compilation. The *Guide* **updates** *External Debt: Definition, Statistical Coverage, and Methodology*, 1988.”

## Chapter VII

¶373. First sentence. Should read: “The *DCS* can be rearranged to show that *broad-money liabilities (BML)* equal the sum of *net foreign assets, domestic claims (DC)*, and *other items (net) (OIN)*.”

¶373. Third sentence. Should read: “*DC* comprises *net claims on central government* and *claims on other sectors of the economy*.”

¶376. Text following the equation should read: “where *NCG* and *CORS* denote *net claims on central government* and *claims on other sectors of the economy*.”

¶399. “Central bank float represents the amount that the central bank has provided to depository corporations that have sent checks or other items for collection, **even though the central bank has not yet collected from the depository corporation on which the checks or other items were written.**”

**Table 7.1, pages 82–85.** Subheading should read: “Liabilities (By type of **obligation** and creditor).”

**Table 7.1, page 82.** Subsection for “Deposits excluded from broad money—Transferable deposits, In national currency.” Footnote 4 applies also to other financial corporations: that is, should read: “Other financial corporations **4/**.”

## Chapter VIII

¶417. First bullet, last sentence. Should read: “The balancing item is net lending or net borrowing, depending on whether saving *plus* capital transfers is **greater or less** than the net acquisition of nonfinancial assets (equation 6).”

## 2. Source Data for Monetary and Financial Statistics

### Introduction

**2.1** This chapter describes the linkages between the stock and flow data in an institutional unit's information system and the source data reported to compilers of monetary and financial statistics. This *Guide* recommends that *the source data for the monetary and financial statistics should be obtained, to the extent possible, from the accounting records of institutional units, as based on the accounting rules of the country in which the units have their center of economic interest.*

**2.2** Only data reported by institutional units in the financial corporations sector are extensively covered in this chapter. These constitute the data for the monetary statistics and a subset of data for the financial statistics. Other data for the financial statistics, which are obtained from institutional units outside the financial corporations sector, are covered in Chapter 8 of this *Guide*.

**2.3** In this *Guide*, accounting rules that have been imposed by national law or regulation are called the *national financial reporting standards* of a country.<sup>1</sup> The financial reporting standards of many countries apply only to listed corporations—those that issue equity shares traded on organized exchanges. Unlisted corporations and other business enterprises in these countries may be subject to less stringent accounting rules or may be permitted to follow the commonly accepted accounting practices on an informal basis. In addition to the financial reporting standards for corporations, separate standards may apply to a specific sector or subsector—for example, the central bank, central government, state and local government, nonprofit

institutions serving households (NPISH), or foreign-owned enterprises.

**2.4** The general and subsidiary accounting ledgers<sup>2</sup> of an institutional unit are constructed in accordance with a *chart of accounts* (also called *plan of accounts*)—a presentation of the accounting codes and corresponding descriptors for all categories and subcategories of assets and liabilities (all balance-sheet accounts) and revenue and expense items (all profit-or-loss accounts).<sup>3</sup> The ledgers are designed to facilitate the application of double-entry bookkeeping.

**2.5** In implementing the *MFSM* methodology, a financial corporation will need to expand its information system to include data that conform to the economic sectorization (Chapter 3) and financial asset classifications (Chapter 4) recommended in the *MFSM* and this *Guide*. These data requirements can be met through expansion of the general and subsidiary accounting ledgers or through creation of stand-alone databases that, though part of the information system, are not integrated into the chart of accounts of the institutional unit. The latter approach is applicable when expansion of the accounting ledgers is impractical and, in particular, when source data for the monetary statistics are to be obtained by estimation methods.

**2.6** Data from a financial corporation's accounting records may be directly usable as source data for the monetary statistics, or the data may need to be adjusted for conformity with the accounting rules for the monetary and financial statistics, as described in Chapter 5 of this *Guide*. The same types of adjustments may apply to the accounting data of listed and

<sup>1</sup>This terminology has been adopted to mirror the more widely recognized terminology of International Financial Reporting Standards (IFRSs). Depending on the country, the standards may be referred to as financial reporting standards, accounting standards, or generally accepted accounting principles.

<sup>2</sup>Traditionally, the ledgers were bound volumes in which the accounting entries were handwritten. The ledgers now are computerized, even in many small enterprises.

<sup>3</sup>A separate set of accounting codes and descriptors for off-balance-sheet items often is shown after the chart of asset, liability, revenue, and expense accounts.



unlisted corporations, or additional data adjustments may be required for unlisted corporations that do not apply the national financial reporting standards.

**2.7** From a financial corporation's perspective, the source data consist of all data that must be reported to the monetary statistics compilers. These may include (1) accounting data; (2) accounting data that have been adjusted for conformity with the *MFSM* methodology; (3) estimated data obtained from outside the accounting system and directly usable in the monetary statistics; and (4) other reported data that are inputs to data adjustments and estimations performed by the compilers.

**2.8** From a compiler's perspective, the source data consist of all data needed for the compilation of the monetary statistics, including the data reported by the financial corporations and other data suppliers,<sup>4</sup> if applicable, and adjusted or estimated data that are produced by the compilers themselves.

**2.9** This chapter emphasizes the source data that would be obtainable from a financial corporation's accounting records, if the accounting system of the financial corporation were expanded to meet the specific data needs of the monetary statistics compilers. However, major expansions of financial corporations' accounting systems are not always practical, particularly for small financial corporations and for those for which the reporting of monetary data is a new activity. The last major section of this chapter describes the use of data estimation techniques and other practical aspects of source data collection.

**2.10** This *Guide* recommends that *the compilers of the monetary and financial statistics provide report forms and instructions on the specific data to be reported by financial corporations, but that each financial corporation be given latitude in determining the information management processes for data production through expansion of its accounting system or other means.*<sup>5</sup>

<sup>4</sup>For example, source data may be provided by trade associations or regulatory/supervisory agencies to which other financial corporations (insurance corporations, pension funds, etc.) report.

<sup>5</sup>This recommendation, in addition to practicality, has a legal dimension for countries in which the statistical authorities are not authorized to mandate expansions or other revisions in corporations' information systems.

## International Financial Reporting Standards

**2.11** This *Guide* focuses on the International Financial Reporting Standards (IFRSs), issued by the International Accounting Standards Board (IASB),<sup>6</sup> to illustrate the relationship between financial corporations' accounting data and the source data for the monetary and financial statistics. Spurred by the globalization of financial markets, many countries have been adopting the IFRSs as their accounting standards, or have been harmonizing their national financial reporting standards with the IFRSs.

**2.12** The broad objectives of the IASB are summarized in its Mission Statement:

The International Accounting Standards Board is an independent, privately-funded accounting standard-setter based in London, UK. The Board members come from nine countries and have a variety of functional backgrounds. The IASB is committed to developing, in the public interest, a single set of high quality, understandable and enforceable global accounting standards that require transparent and comparable information in general purpose financial statements. In addition, the IASB co-operates with national accounting standard-setters to achieve convergence in accounting standards around the world.

**2.13** The IASB uses the term IFRSs in a collective sense to encompass its *Framework for the Preparation and Presentation of Financial Statements (IASB Framework)*, *International Accounting Standards (IASs)* and appendixes, *Implementation Guidance for IAS 39*, and supporting interpretations issued by its International Financial Reporting Interpretations Committee (or its predecessor, the Standing Interpretation Committee). The term IFRSs also subsumes the newest individual Standards issued by the IASB—each of which is designated as an IFRS.

**2.14** The main IASB reference for the preparation of this *Guide* was *International Financial Reporting Standards, 2005* (see International Accounting Standards Board, 2005a) containing the *Framework for the Preparation and Presentation of Financial Statements, IFRS 1* through *IFRS 6*, and *IAS 1* through

<sup>6</sup>The IASB was preceded by the Board of the International Accounting Standards Committee (1973–2001). The IASB is authorized to amend or withdraw International Accounting Standards and Interpretations issued under previous Constitutions, as well as issue new Standards and Interpretations. For additional information on the IASB and a chronology of IASB activities since 2001, see <http://www.iasb.org>.

*IAS 41* (excluding *IAS 3* through *IAS 6*, *IAS 9*, *IAS 13*, *IAS 15*, *IAS 22*, *IAS 25*, and *IAS 35*, which have been superseded by other Standards). The *IASB Framework* (§8) states that the IFRSs are applicable to all types of business enterprises:

The *Framework* applies to the financial statements of all commercial, industrial, and business reporting entities, whether in the public or the private sectors. A reporting entity is an entity for which there are users who rely on the financial statements as their major source of financial information about the entity.

**2.15** The IFRSs cover some types of financial transactions of governments (for example, *IAS 20—Accounting for Government Grants and Disclosure of Government Assistance*) but do not include standards to address the many special issues within public sector accounting. Financial reporting for central governments, regional and local governments, related governmental agencies, and their constituencies is covered in the International Public Sector Accounting Standards (IPSASs) issued by the International Federation of Accountants (IFAC), which strives to harmonize the IPSASs with the IFRSs and other ongoing work of the IASB.<sup>7</sup>

**2.16** Although references are made to other Standards in the IFRSs, the focus in this *Guide* is the IFRSs and IASs that pertain to the financial assets and liabilities of financial corporations, including:<sup>8</sup>

- *IFRS 7—Financial Instruments: Disclosures and Guidance on Implementing IFRS 7—Financial Instruments: Disclosures* (August 2005);<sup>9</sup>
- *IAS 19—Employee Benefits*;
- *IAS 26—Accounting and Reporting by Retirement Benefit Plans*;
- *IAS 32—Financial Instruments: Presentation* (December 2003, as amended in August 2005); and
- *IAS 39—Financial Instruments: Recognition and Measurement and Guidance on Implementing IAS 39—Financial Instruments: Recognition and Measurement* (December 2003, incorporating

<sup>7</sup>The IPSASs and information on the IFAC and its activities are available online at <http://www.ifac.org>.

<sup>8</sup>The versions of these Standards used in preparing this *Guide* include amendments resulting from new and amended IFRSs issued through 2005.

<sup>9</sup>IFRS 7 supercedes *IAS 30—Disclosures in the Financial Statements of Banks and Similar Financial Institutions* and the disclosure requirements in *IAS 32—Financial Instruments: Disclosure and Presentation*.

*Amendment to IAS 39—Financial Instruments: Recognition and Measurement. The Fair Value Option*, June 2005).

## The IFRSs and MFSM Methodology

### Overview

**2.17** The IFRSs focus on the data and other information for the preparation and dissemination of financial statements. The *IASB Framework* (§12) states:

The objective of financial statements is to provide information about the financial position, performance and changes in financial position of an entity that is useful to a wide range of users in making economic decisions.

**2.18** The financial statements are listed in *IAS 1.8*:

A complete set of financial statements comprises:

- (a) a balance sheet;
- (b) an income statement;
- (c) a statement of changes in equity showing either:
  - (i) all changes in equity, or
  - (ii) changes in equity other than those arising from transactions with equity holders acting in their capacity as equity holders;
- (d) a cash flow statement; and
- (e) notes, comprising a summary of significant accounting policies and other explanatory notes.

**2.19** The objective of the monetary and financial statistics is to provide information on financial positions and changes in financial positions of the financial corporations sector and subsectors or, in the case of the financial statistics, of all sectors and subsectors of the economy.

**2.20** The monetary statistics consist of (1) the *sectoral balance sheets* of the central bank, other depository corporations, and other financial corporations; (2) the *Central Bank Survey (CBS)*, *Other Depository Corporations Survey (ODCS)*, *Other Financial Corporations Survey (OFCS)*, *Depository Corporations Survey (DCS)*, and *Financial Corporations Survey (FCS)*; and (3) memorandum items that accompany the sectoral balance sheets. The framework for the sectoral balance sheets and the surveys encompasses the data for both financial positions (stocks) and changes in financial positions (flows).

**2.21** The financial statistics include changes in financial positions (flows)—the *financial account* and *flow-of-funds accounts*, the *other changes in*

the volume of assets account, and the revaluation account—and financial positions (stocks) as presented in balance sheets for all economic sectors.<sup>10</sup>

**2.22** The balance sheets in the financial statements, as specified in the IFRSs, and the balance sheets in the monetary and financial statistics have many characteristics in common. In each case, the balance-sheet data are compiled through double-entry accounting; the accrual principle is used in accounting for revenues and expenses; and valuations for assets and liabilities in some major categories are based on market prices or fair values. However, the presentation of assets and liabilities is standardized in the monetary and financial statistics, compared with the IFRS guidance that introduces a substantial degree of flexibility in the classification of assets and liabilities on the balance sheet.<sup>11</sup>

**2.23** In the *IASB Framework* (§§25–43), criteria for assessing the quality of the data in the financial statements include understandability, relevance, reliability, comparability, and timeliness. These criteria are compatible with the IMF criteria for macroeconomic statistics, as contained in the IMF’s *Data Quality Assessment Framework* (DQAF), summarized in Box 2.1. The DQAF quality dimensions that are most directly relevant for assessing the source data for the monetary and financial statistics are methodological soundness, accuracy and reliability, serviceability, and accessibility.

**2.24** The data quality criteria in the *IASB Framework* are consistent with the criteria for the source data for the monetary and financial statistics. The data quality criteria in the *IASB Framework* pertain to the uniform application of *internationally accepted accounting standards* by individual enterprises within a country and across countries. Uniform application of concepts, definitions, asset and liability classification, and economic sectorization in accordance with *internationally accepted statistical guidelines* is outside the scope of the data quality criteria of the *IASB Framework*.

**2.25** The main groups of users of the financial statements, as categorized in the *IASB Framework* (§§9), are investors, employees, lenders, suppliers and

other trade creditors, customers, governments and their agencies, and the public. The *IASB Framework* (§§9(f)) states:

Governments and their agencies are interested in the allocation of resources and, therefore, the activities of entities. They also require information in order to regulate the activities of entities, determine taxation policies and as the basis for national accounts and similar statistics.

**2.26** The accounting data in the financial statements may be appropriate for statistical reporting on the financial positions and activities of an individual enterprise,<sup>12</sup> but are not sufficient for statistical reporting on the aggregate financial positions and on the totality of activities of all institutional units within a subsector of an economy. The IFRSs and the *MFSM* methodology differ in several areas:

- *Periodicity and timeliness.* In the IFRSs, timely preparation of annual financial statements is specified as within six months after the reference date/period—a much longer lag than is deemed appropriate for the reporting of monetary statistics.
- *Sectorization of financial assets and liabilities.* In the *MFSM* methodology, stock and flow data for financial corporations need to be disaggregated into separate categories for the central bank, ODCs, other financial corporations (OFCs), central government, state and local government, public nonfinancial corporations, other nonfinancial corporations, other resident sectors (households and NPISH), and nonresidents. Sectoral disaggregation is not specified in the IFRSs.
- *Symmetry of debtor/creditor recording.* The *MFSM* methodology specifies that debtor and creditor’s records should agree in amount and time of recording of all transactions and revaluations. These issues do not arise in the IFRSs, which focus exclusively on the financial records of an individual enterprise.
- *Balance-sheet presentation of loans on a gross or net basis.* Both IAS 39 and the *MFSM* account for reductions in realizable values of loan portfolios, arising from nonperforming loans (NPLs). In IAS 39, loan asset values are directly adjusted for expected loan losses, or are presented as gross loans less allowances for loan losses. In the *MFSM*

<sup>10</sup>See the 1993 SNA (Chapters XI–XIII); the *MFSM* (Chapter VIII); and this *Guide* (Chapter 8).

<sup>11</sup>See *IAS 1—Presentation of Financial Statements*.

<sup>12</sup>Individual financial corporations and other enterprises may be required to report data for purposes of government regulation, supervision, or policymaking. Such data are outside the scope of the monetary and financial statistics.

**Box 2.1. Data Quality Assessment Framework (DQAF) of the IMF<sup>1</sup>****0. Prerequisites of quality**

- 0.1 **Legal and institutional environment.** The environment is supportive of statistics.
- 0.2 **Resources.** Resources are commensurate with needs of statistical programs.
- 0.3 **Relevance.** Statistics cover relevant information on the subject field.
- 0.4 **Other quality management.** Quality is a cornerstone of statistical work.

**1. Assurances of integrity.** *The principle of objectivity in the collection, processing, and dissemination of statistics is firmly adhered to.*

- 1.1 **Professionalism.** Statistical policies and practices are guided by professional principles.
- 1.2 **Transparency.** Statistical policies and practices are transparent.
- 1.3 **Ethical standards.** Policies and practices are guided by ethical standards.

**2. Methodological soundness.** *The methodological basis for the statistics follows internationally accepted standards, guidelines, or good practices.*

- 2.1 **Concepts and definitions.** Concepts and definitions accord with internationally accepted statistical frameworks.
- 2.2 **Scope.** The scope is in accord with internationally accepted standards, guidelines, or good practices.
- 2.3 **Classification/sectorization.** Classification and sectorization systems are in accord with internationally accepted standards, guidelines, or good practices.
- 2.4 **Basis for recording.** Flows and stocks are valued and recorded according to internationally accepted standards, guidelines, or good practices.

**3. Accuracy and reliability.** *Source data and statistical techniques are sound and statistical outputs sufficiently portray reality.*

- 3.1 **Source data.** Source data available provide an adequate basis to compile statistics.
- 3.2 **Assessment of source data.** Source data are regularly assessed.
- 3.3 **Statistical techniques.** Statistical techniques employed conform to sound statistical procedures.
- 3.4 **Assessment and validation of intermediate data and statistical outputs.** Intermediate results and statistical outputs are regularly assessed and validated.
- 3.5 **Revision studies.** Revisions are tracked and mined for the information they may provide.

**4. Serviceability.** *Statistics, with adequate periodicity and timeliness, are consistent and follow a predictable revisions policy.*

- 4.1 **Periodicity and timeliness.** Internationally accepted dissemination standards are followed.
- 4.2 **Consistency.** Statistics are consistent within the dataset, over time, and with major datasets.
- 4.3 **Revision policy and practice.** Data revisions follow a regular and publicized procedure.

**5. Accessibility.** *Data and metadata are easily available and assistance to users is adequate.*

- 5.1 **Data accessibility.** Statistics are presented in a clear and understandable manner, forms of dissemination are adequate, and statistics are made available on an impartial basis.
- 5.2 **Metadata accessibility.** Up-to-date and pertinent metadata are made available.
- 5.3 **Assistance to users.** Prompt and knowledgeable support service is available.

<sup>1</sup>For detailed information, see the IMF's Data Quality Reference Site at <http://dsbb.imf.org/Applications/web/dqrs/dqrsintroduction/>.

methodology, loan asset values are presented on a gross basis, but supplementary data on expected loan losses are to be provided so that the realizable values of loans can be calculated.

**Accrual Accounting****2.27** The *IASB Framework* (§22) states:

In order to meet their objectives, financial statements are prepared on the accrual basis of accounting. Under this basis, the effects of transactions and other events are recognised when they occur (and not as cash or its equivalent is received or paid) and they are recorded in the accounting records and reported in the financial statements of the periods to which they relate.

**2.28** The *MFSM* (§227) states:

Accrued interest on deposits, loans, and securities other than shares should be incorporated into the outstanding amount of the financial asset or liability, rather than being treated as part of other accounts receivable/payable.

**2.29** Most national financial reporting standards follow the accrual accounting principle, but many standards do not specify that the accrued interest should be included in the outstanding amounts of the financial assets or liabilities that give rise to the accrued interest earning or expense. In the methodology of the *MFSM* and this *Guide*, *accrued interest earnings recorded in other accounts receivable need to*

*be reclassified as part of the outstanding amounts of the financial assets, and accrued interest expenses recorded in other accounts payable need to be reclassified as part of the outstanding amounts of the liabilities, in using the enterprise's accounting data as source data for the monetary statistics.*

**2.30** The 1993 SNA (§11.101) states that interest accruing on securities other than shares should be recorded as part of the outstanding amount of the securities. For loans and deposits, the 1993 SNA (§11.101) provides two options: inclusion of accrued interest in the outstanding amounts of loans and deposits or inclusion of accrued interest in the *Other* subcategory of *Other accounts receivable/payable*. This Guide recommends that *the accrued interest be included in the outstanding amounts of loans and deposits*. This approach results in uniform treatment of accrued interest across all categories of interest-bearing assets and liabilities.

**2.31** In the IFRSs and the MFSM methodology, the accrual principle also applies to noninterest types of revenue and expense—for example, accrued wages and salaries, accrued taxes, and valuation changes (that is, unrealized gains or losses) on financial assets and liabilities. In the IFRSs and the MFSM methodology, dividends are also recorded on an accrual basis, as a payable at the time when the dividend is declared.

### Going Concern

**2.32** IAS 1—*Presentation of Financial Statements* (§23) states:

When preparing financial statements, management shall make an assessment of an entity's ability to continue as a going concern. Financial statements shall be prepared on a going concern basis unless management either intends to liquidate the entity or to cease trading, or has no realistic alternative but to do so.

**2.33** The valuation principles and other accounting rules for the monetary and financial statistics are based on the treatment of institutional units as going concerns, except for the treatment of financial corporations in the process of liquidation or reorganization (see Chapter 6 in this Guide).

### Periodicity and Timeliness

**2.34** IAS 1—*Presentation of Financial Statements* (§49) states: “Financial statements shall be presented at least annually.”

**2.35** IAS 34—*Interim Financial Reporting* (§1) states:

The International Accounting Standards Committee encourages publicly traded entities to provide interim financial reports that conform to the recognition, measurement, and disclosure principles set out in this Standard. Specifically, publicly traded entities are encouraged:

- (a) to provide interim financial reports at least as of the end of the first half of their financial year; and
- (b) to make their interim reports available not later than 60 days after the end of the interim period.

The source data for the monetary and financial statistics are reported and compiled on a more frequent basis, and the reporting lags are shorter,<sup>13</sup> compared with the standards for financial statement preparation in the IFRSs.

**2.36** This Guide, unlike the MFSM, contains explicit recommendations on the periodicity of the monetary and financial statistics. This Guide recommends *the following periodicity for source data reporting (in the format of the sectoral balance sheet) and compilation of the monetary statistics:*

- Monthly monetary statistics for the central bank, ODCs, and depository corporations (DCs) on a consolidated basis. *Reporting of source data and compilation of the CBS, ODCS, and DCS on a monthly basis.*
- Quarterly monetary statistics for OFCs. *Reporting of source data and compilation of the OFCS on a monthly or quarterly basis.*
- Quarterly monetary statistics for all financial corporations (FCs) on a consolidated basis. *Compilation of the FCS on a monthly or quarterly basis, depending on whether the OFCS is compiled on a monthly or quarterly basis.*

**2.37** *Financial statistics.* Reporting of source data and compilation of the financial statistics on a quarterly or annual basis depends on which basis agrees with the periodicity of the data reporting and compilation for the current account and capital account of the national accounts statistics for the country.

**2.38** Most countries have longstanding experience with the compilation of balance-sheet (stock) data

<sup>13</sup>Paragraph 52 of the 1997 version of IAS 1 specified that “An enterprise should be in a position to issue its financial statements within six months of the balance sheet date.” This specification does not appear in the amended version (2004).

for the central bank and ODCs on a monthly basis,<sup>14</sup> and some countries presently compile balance-sheet data for some or all categories of OFCs on a quarterly or annual basis or, for a few countries, on a monthly basis. Countries may experience difficulties with the development of quarterly data reporting for OFCs on a timely basis, given that insurance corporations, pension funds, and financial auxiliaries often report only annual data and only with lengthy reporting lags. Such data are often reported to supervisory authorities or other government agencies that have not been involved with the reporting of source data for monetary or financial statistics. For these countries, quarterly data reporting for the OFCs may need to be developed over the medium term, possibly entailing the establishment of direct reporting of data from OFCs to the compilers of the monetary statistics.

**2.39** Compilation of the financial statistics on a quarterly basis is applicable to countries that already have quarterly data for the current account and capital account of their national accounts statistics, or are currently working on migration from annual to quarterly national accounts statistics. It is recommended that *a country's program for developing the quarterly data for the national accounts statistics encompass the development of quarterly financial statistics.*

**2.40** This *Guide* does not make specific recommendations on the timeliness of the reporting of the source data for the monetary and financial statistics. In many countries, DCs are required to provide the source data to the compilers of the monetary statistics within the month immediately following the reference month for the data. In other countries, somewhat shorter or longer maximum reporting lags for the monetary data are stipulated. A somewhat longer period—often between a calendar quarter and one year—may be required for the reporting of quarterly or annual data for the OFCs subsector in the monetary statistics and for the components of the financial statistics.

**2.41** The financial statements for enterprises in some countries may be prepared on the basis of a fiscal

year that differs from the calendar year. In addition, IAS 1 (¶50) states:

Normally, financial statements are consistently prepared covering a one-year period. However, for practical reasons, some entities prefer to report, for example, for a 52-week period. This Standard does not preclude this practice, because the resulting financial statements are unlikely to be materially different from those that would be presented for one year.

For the monetary and financial statistics, all stock data are end-of-period amounts for a calendar month, quarter, or year; all flows are measured over a calendar month, quarter, or year. Data that do not meet this requirement need to be adjusted to a calendar-year basis.

### Terminology

**2.42** The IFRSs and the methodology for the monetary and financial statistics contain numerous differences in concepts and terminology. These differences do not create difficulties, if the reporters and compilers of the source data for the monetary and financial statistics are familiar with both sets of terminology.<sup>15</sup>

**2.43** The IFRSs use the term *financial assets and financial liabilities*, whereas the *MFSM* and this *Guide* use *financial assets and liabilities*.<sup>16</sup> In the IFRSs, the original entry of an asset or liability into the balance-sheet accounts is called the *initial measurement* of the asset or liability. *Revaluation* of an asset or liability, as defined for the monetary and financial statistics, is termed *remeasurement* of the asset or liability in the IFRSs. In the IFRSs, the *equity* of an enterprise is classified separately from its *liabilities*, whereas the equity account is designated as the *liability account for shares and other equity* in the monetary and financial statistics (consistent with the 1993 SNA framework). Chapters 4 and 5 of this *Guide* include numerous references to *provisions for losses on impaired assets*, which in the IFRSs are referred to as *allowances for losses on impaired assets*.

<sup>14</sup>In many countries, depository corporations are required to report additional data on a daily, weekly, or biweekly basis. Such data, though important for economic policy formulation in some countries, are outside the scope of the monetary statistics as defined in the *MFSM* and this *Guide*.

<sup>15</sup>A minor difference involves spelling; the IFRSs are written in British-standard English, and the *MFSM* and this *Guide* use American-standard English. In this *Guide*, quotations from the IFRSs retain the British-standard spelling as contained in the Standards themselves.

<sup>16</sup>The methodology of the monetary and financial statistics concerns only liabilities of a financial nature.

**2.44** In the *MFSM* and this *Guide*, *market value* and *fair value* are separate concepts. “The fair value of a financial asset or liability refers to an approximation of the value that would arise from a market transaction between unrelated parties” (*MFSM*, ¶219). Fair value is the estimated value that must be used when a market price quotation for a financial asset or liability is unavailable. IAS 32.11 states: “*Fair value* is the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm’s length transaction.” In the IFRSs, the concept of *fair value* encompasses both market values based on price quotations in active markets and fair values that, in the absence of market price quotations, are estimated to approximate market values.<sup>17</sup>

The value of a domestic currency loan should be the amount of the creditor’s outstanding claim (equal to the debtor’s obligation), which comprises the outstanding principal amount plus any accrued interest (that is, interest earned but not yet due for payment). Such valuation is herein referred to as the *book value* of a loan. Loans denominated in foreign currency should be recorded at their book values when expressed in the foreign currency and, for conversion to domestic currency units, should be valued on the basis of the market exchange rates that prevailed on the transaction or balance sheet date. (*MFSM*, ¶205)

**2.45** For the monetary statistics, several categories of financial assets and liabilities are recorded at *book value*, a concept that does not appear in the IFRSs. The counterpart in the IFRSs is valuation at *amortized cost*, which is defined in IAS 39.9:

The *amortised cost of a financial asset or financial liability* is the amount at which the financial asset is measured at initial recognition minus principal repayments, plus or minus the cumulative amortisation using the effective interest method of any difference between the initial amount and the maturity amount, and minus any reduction (direct or through the use of an allowance account) for impairment or uncollectibility.

The *effective interest rate* is a method of calculating the amortised cost of a financial asset or financial liability (or group of financial assets or financial liabilities) and of allocating the interest income or interest expense over

a relevant period. The effective interest rate is the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial instrument, or when appropriate, a shorter period to the net carrying amount of the financial asset or financial liability.

Valuation of financial assets and liabilities at *amortized cost*, as specified in IAS 39, is consistent with the valuation at *book value* in the *MFSM* methodology. In the absence of accrued interest, the valuation of a loan or deposit at amortized cost is equivalent to the book value.

**2.46** The *book value of a domestic currency loan* is specified in the *MFSM* as the loan principal plus accrued interest, but *principal* is not defined therein. In this *Guide*, *original principal* is defined as the amount borrowed and to be repaid, excluding all interest (due or accrued). The *outstanding principal* (also called *remaining principal*) is defined as the original principal *less* any noninterest payments that the debtor has made to reduce the *original principal*.

**2.47** In this *Guide*, the *book value of a domestic currency deposit* is defined as the outstanding balance in the deposit account (inclusive of interest already recorded and remaining in the account) *plus* accrued interest. If desired, the book value of a deposit can be stated in terms of a *deposit principal*—the outstanding balance in the account—and an accrued-interest component.

**2.48** *Book value* is used in the *MFSM* and this *Guide* to denote the valuation method for various components of other accounts receivable/payable, insurance technical reserves, and liabilities within the shares-and-other-equity account. These are assets and liabilities that are non-interest-bearing and therefore do not have an accrued interest component.

**2.49** To avoid ambiguity, this *Guide* minimizes the use of the term *principal* in referring to the outstanding amounts for securities other than shares. For most securities, the amount of borrowing—the debtor’s proceeds from issuing the securities—is referred to as the *issue price* or *market price at time of issue*. During the life of the securities, the outstanding amount for the securities is referred to as the *market price* (or fair value), which reflects any accumulation of accrued interest. The amount paid to discharge the

<sup>17</sup>The *Fair Value Option*, IAS 39 Amendment (see International Accounting Standards Board, 2005b), states: “The best evidence of fair value is quoted prices in an active market.” (¶48A) In this guide, *fair value* is used when quoting the IFRSs, and *market or fair value* in the context of the monetary and financial statistics.

debtor's obligation at the maturity of the securities is referred to as the *face value* (also called *redemption value*) of the securities. For coupon-type securities, the face value excludes any final coupon payment made at the time of redemption. For discount-type securities, the face value includes the interest that has accrued over the life of the securities, which is measured as the difference between the issue price and face value of the securities.

**2.50** The term *principal* cannot be avoided in descriptions of securities for which principal is an integral characteristic, including those with indexed principal and pass-through and other asset-backed securities. The terms *principal* (meaning *face value*) and *notional principal* are used in describing the valuation of financial derivatives. Usage of the term *principal* is apparent from the descriptions of these financial instruments in Chapters 4 and 5 of this *Guide*.

### Financial Asset Classifications and Valuation Rules

The classification scheme of the 1993 SNA should be used to classify financial assets. This classification scheme is based primarily on two criteria: (1) the liquidity of the asset and (2) the legal characteristics that describe the form of the underlying creditor/debtor relationship. (*MFSM*, ¶120)

**2.51** The classification scheme for the financial assets and liabilities in the sectoral balance sheets in the monetary statistics is shown in Box 2.2. A single valuation rule—either book value or market/fair value—is applied to each category of financial assets and liabilities.

**2.52** In contrast, *IAS 39—Financial Instruments: Recognition and Measurement* has a separate set of classifications that specify the rules for financial asset revaluation on the basis of an enterprise's motivations for acquiring the financial assets, either for trading or for holding to maturity. These classifications are shown in Box 2.3. The general rules for the revaluation of securities are that those in the held-for-trading category are to be revalued at market or fair value, and those in the category of held-to-maturity investments are to be revalued at amortized cost. However, major exceptions to the general rules recently have been introduced.

### Box 2.2. Financial Asset and Liability Classifications in the Monetary Statistics

Classification	Valuation method <sup>1</sup>
Monetary gold (central bank)	Market value
SDRs (central bank)	Market value
Currency	Book value (In currency of denomination)
Deposits	Book value (In currency of denomination)
Securities other than shares	Market or fair value
Loans	Book value (In currency of denomination)
Shares and other equities	Market or fair value (asset); book value (liability)
Insurance technical reserves	Market or fair value <sup>2</sup>
Financial derivatives	Market or fair value
Other accounts receivable/payable	Book value

<sup>1</sup>All foreign-currency-denominated assets and liabilities are converted to national currency units at market exchange rates.

<sup>2</sup>Except for Prepayments of insurance premiums and Reserves against outstanding claims, which are recorded at book value.

**2.53** A separate clause specifies the general rules for revaluation of liabilities. IAS 39.47 states:

After initial recognition, an entity shall measure all financial liabilities at amortised cost using the effective interest method, except for:

- (a) financial liabilities at fair value through profit or loss. Such liabilities, including derivatives that are liabilities, shall be measured at fair value except for a derivative liability that is linked to and must be settled by delivery of an unquoted equity instrument whose fair value cannot be reliably measured, which shall be measured at cost.
- (b) financial liabilities that arise when a transfer of a financial asset does not qualify for derecognition or is accounted for using the continuing involvement approach. . . .

**2.54** The IFRSs have evolved toward broad application of valuation at fair value through profit or loss. The revised IAS 39 (December 2005, ¶9) states: “Any financial asset or financial liability within the scope of this Standard may be designated when initially recognised as a financial asset or financial liability at fair value through profit or loss except for investments in equity instruments that do not have a quoted



market price in an active market, and whose fair value cannot be reliably remeasured.” In IAS 39 as subsequently amended,<sup>18</sup> the general rule for revaluation at fair value was replaced by specific rules. However, the new rules impart the potential for relatively broad applicability of valuation at fair value and, in particular, can be used to justify the valuation of loans or deposits at fair value in some circumstances. Appendix A of the amendment to the Standard contains several examples of assets or liabilities that, though generally revalued at amortized cost, can be revalued at fair value. For example, in the case of loans, revaluation at fair value can be justified under IAS 39 when “. . . the entity has financed a specific group of loans by issuing traded bonds whose changes in fair value tend to offset each other.”<sup>19</sup>

**2.55** Deposits are included in the category of liabilities that, in some circumstances, may be valued at fair value. Regarding liabilities with demand (that is, callability) features, IAS 39.49 states: “The fair value of a financial liability with a demand feature (for example, a demand deposit<sup>20</sup>) is not less than the amount payable on demand, discounted from the first date that the amount could be required to be paid.”

**2.56** The classifications in Box 2.3 have no counterpart in the *MFSM* and this *Guide*, where a single valuation rule applies to a particular category of financial instrument, whether held as an asset or incurred as a liability. The exception in the monetary statistics is the valuation of shares and other equity. Valuation of assets in the category of shares and other equity is at market or fair value; valuation of liabilities in the category of shares and other equities is at book value on the sectoral balance sheets of financial corporations. However, data on market values or fair values of shares-and-other-equity liabilities are contained in memorandum items that accompany the sectoral balance sheets.

**2.57** For the monetary and financial statistics, all securities holdings are valued at market or fair value, and all loans and deposits are at book value.

<sup>18</sup>Amendment to IAS 39—Financial Instruments: Recognition and Measurement. *The Fair Value Option*, June 2005.

<sup>19</sup>*The Fair Value Option*, Appendix A, ¶AG4E (d) (ii).

<sup>20</sup>This statement is somewhat confusing with regard to demand deposits, which are transferable and therefore immediately payable. The current day is the “first date that the amount could be required to be paid,” discounting does not apply to the amount payable, and the valuation in terms of amortized cost is at book value.

For financial corporations that apply IAS 39, security portfolios held for trading are valued consistent with the *MFSM* methodology, whereas other security portfolios are not.

Stocks and flows denominated in foreign currency should be converted to national currency values at the market exchange rate prevailing at the moment they are entered in the accounts, that is, the moment when the transaction or other flow occurs, or at the point in time to which the balance sheet applies. (*MFSM*, ¶203)

**2.58** In the IFRSs, foreign-currency-denominated financial assets and liabilities are to be revalued at market exchange rates, as specified in *IAS 21—The Effects of Changes in Foreign Exchange Rates*. IAS 21.23 states:<sup>21</sup>

At each balance-sheet date:

- (a) foreign currency monetary items shall be reported using the closing rate;
- (b) non-monetary items that are measured in terms of historical cost in a foreign currency shall be translated using the exchange rate at the date of the transaction; and
- (c) non-monetary items that are measured at fair value denominated in a foreign currency shall be translated using the exchange rates at the date when the fair value was determined.

**2.59** The IFRS requirements for revaluation of foreign-currency-denominated financial assets and liabilities are consistent with the monetary and financial statistics methodology in which the guiding principles can be simply stated: all foreign-currency-denominated financial assets and liabilities should be valued at market exchange rates, and adjustment is required for any valuation data based on national financial reporting standards in which other rules for conversion of foreign-currency-denominated assets and liabilities to national currency units have been applied.

**2.60** In the monetary and financial statistics, revaluation is not conditioned on whether an asset or liability is part of a hedging relationship<sup>22</sup> or other type of risk-offset between assets/liabilities in a portfolio, as applied in the amended version of IAS 39.

<sup>21</sup>In IAS 21.8, *monetary items* are defined as “. . . units of currency held and assets and liabilities to be received or paid in a fixed or determinable number of units of currency.”

<sup>22</sup>Hedging relationships, which are described in Chapter 5 of this *Guide*, play no part in the accounting rules for the monetary and financial statistics.

### Box 2.3. IFRS Classification of Assets and Liabilities: Valuation and Accounting for Gains and Losses

#### IAS 39—Financial Instruments: Recognition and Measurement<sup>1</sup>

**¶9 (excerption).** The following terms are used in the Standard with the meanings specified:

...

#### Definitions of Four Categories of Financial Instruments<sup>2</sup>

A financial asset or financial liability at fair value through profit or loss is a financial asset or financial liability that meets either of the following conditions.

- (a) It is classified as held for trading. A financial asset or financial liability is classified as held for trading if it is:
- (i) acquired or incurred principally for the purpose of selling or repurchasing it in the near term;
  - (ii) part of a portfolio of identified financial instruments that are managed together and for which there is evidence of a recent actual pattern of short-term profit-taking; or
  - (iii) a derivative (except for a derivative that is a designated and effective hedging instrument).
- (b) Upon initial recognition it is designated by the entity as at fair value through profit or loss. An entity may use this designation only when permitted by paragraph 11A [pertaining to embedded derivatives], or when doing so results in more relevant information, because either
- (i) it eliminates or significantly reduces a measurement or recognition inconsistency . . . that would otherwise arise from measuring assets or liabilities or recognising the gains and losses on them on different bases; or
  - (ii) a group of financial assets, liabilities or both is managed and its performance is evaluated on a fair value basis,

in accordance with a documented risk management or investment strategy . . .

*Held-to-maturity investments* are non-derivative financial assets with fixed or determinable payments and fixed maturity that an entity has the positive intention and ability to hold to maturity . . . other than:

- (a) those that the entity upon initial recognition designates as at fair value through profit or loss;
- (b) those that the entity designates as available for sale; and
- (c) those that meet the definitions of loans and receivables.

...

*Loans and receivables* are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market, other than:

- (a) those that the entity intends to sell immediately or in the near term, which shall be classified as held for trading, and those that the entity upon initial recognition designates as at fair value through profit or loss;
- (b) those that the entity upon initial recognition designates as available for sale; or
- (c) those for which the holder may not recover substantially all of its initial investment, other than because of credit deterioration, which shall be classified as available for sale.

An interest acquired in a pool of assets that are not loans or receivables (for example, an interest in a mutual fund or a similar fund) is not a loan or receivable.

*Available-for-sale financial assets* are those non-derivative financial assets that are designated as available for sale or are not classified as (a) loans and receivables, (b) held-to-maturity investments or (c) financial assets at fair value through profit or loss . . .<sup>3</sup>

<sup>1</sup>Issued in December 2003; amended in April 2004 and June 2005.

<sup>2</sup>A separate category is not include for deposits, which are subsumed within loans and receivables.

<sup>3</sup>Equity shares account for most available-for-sale financial assets. Equity shares, which by definition do not have maturities, cannot qualify for inclusion in held-to-maturity investments.

In the *MFSM* methodology, revaluation is strictly based on the valuation rules in Box 2.2. To obtain the data for the monetary and financial statistics, some components of the data based on IAS 39 need to be adjusted:

- Securities other than shares in the category of held-to-maturity investments, if valued at amortized cost, need to be revalued at market or fair value.

- Equity shares in the category of available-for-sale financial assets, if valued at amortized cost, need to be revalued at market or fair value.<sup>23</sup>

<sup>23</sup>For the financial statistics, the same type of adjustment applies to both assets and liabilities in the form of shares and other equity. For the monetary statistics, liabilities in the form of shares and other equity are measured at book value.

- Loans and deposits, if valued at market or fair value under *The Fair Value Option* of IAS 39, need to be restated at book value.

**2.61** In the IFRSs, specific rules are applied for the recording of gains or losses arising for revaluations, either through recording in the profit-or-loss accounts (wherein gains are recorded as income, and losses as expenses) or recording directly in shares and other equity. IAS 39.55 states:

A gain or loss arising from a change in the fair value of a financial asset or financial liability that is not part of a hedging relationship . . . shall be recognised, as follows:

- (a) A gain or loss on a financial asset or financial liability classified as at fair value through profit or loss shall be recognised in profit or loss.
- (b) A gain or loss on an available-for-sale financial asset shall be recognised directly in equity, through the statement of changes in equity (see *IAS 1—Presentation of Financial Statements*), except for impairment losses . . . and foreign exchange gains and losses . . . , until the financial asset is derecognised [sold or otherwise liquidated], at which time the cumulative gain or loss previously recognised in equity shall be recognised in profit or loss.

IAS 39.56 states:

For financial assets and financial liabilities carried at amortised cost . . . , a gain or loss is recognised in profit or loss when the financial asset or financial liability is derecognised or impaired, and through the amortization process.

**2.62** Specific rules also apply to accounting for the holding gains or losses from the three categories of hedging relationships permitted under IAS 39: (1) fair-value hedges, (2) cash flow hedges, and (3) hedges of a net investment in a foreign operation. For the fair value hedge, “. . . the gain or loss on the hedged item attributable to the hedged risk shall adjust the carrying amount of the hedged item and be recognised in profit or loss” [IAS 39.89(b)]. For the other two types of hedges, “. . . (a) the portion of the gain or loss on the hedging instrument that is determined to be an effective hedge . . . shall be recognised directly in equity through the statement of changes in equity (see IAS 1); and (b) the ineffective portion shall be recognized in profit or loss” (IAS 39.95 and IAS 39.102).

**2.63** For the monetary and financial statistics, fully accounting for gains and losses arising from

the revaluation of financial assets and liabilities is an important part of the methodology, given that the total gain or loss—referred to as the *valuation change*, or *revaluation*, in each reporting period for a category of financial assets or liabilities—is a major component of the flow data in the statistics.<sup>24</sup> However, this methodology does not prescribe whether the contra-entry for a gain or loss arising from asset/liability revaluation is to be recorded in the profit-or-loss accounts or directly in shares and other equity. This *Guide* recommends that *the recording of gains and losses arising from the revaluation of assets and liabilities be recorded as prescribed by the national financial reporting standards, either in the profit-or-loss accounts or directly in equity.*<sup>25</sup>

**2.64** Recording of the contra-entries for such gains and losses in the profit-or-loss accounts, rather than in the shares-and-other-equity liability account, has a direct impact on the income statement and statement of changes in equity for an enterprise, as prepared in accordance with national financial reporting standards based on, or similar to, the IFRSs. This issue does not arise for the monetary statistics, which do not contain income statements or statements of changes in equity.

**2.65** Gains and losses arising from revaluation of financial assets and liabilities have an impact on the *shares-and-other-equity* account in the monetary statistics. The impact is direct if the gains or losses are recorded in *shares and other equity*; the impact is indirect if the gains or losses pass through the profit-or-loss accounts and are reflected in *shares and other equity* only when the profit for the period is transferred to *shares and other equity* in the form of an increase or decrease in *retained earnings* (a subcategory of *shares and other equity*) at the end of the

<sup>24</sup>*Valuation changes* and the other two major categories of flow data—*transactions* and *other changes in the volume of assets*—in the monetary statistics are covered in Chapters 4 and 7 (monetary statistics) and Chapter 8 (financial statistics) in this *Guide*.

<sup>25</sup>This recommendation pertains to the recording of unrealized gains or losses, which arise from the revaluation of assets and liabilities that are still on the balance sheet. Realized gains or losses—those resulting from selling or otherwise liquidating assets—are recorded in the revenue (gains) or expense (losses) categories of the profit or loss accounts. The issue of recording unrealized gains/losses in the profit-or-loss accounts or in equity does not arise for the financial statistics. The methodology of the financial account in the *1993 SNA* deals with only the total market value of shares and other equity, rather than with the value of individual components of *shares and other equities*, as described in the *MFSM*, ¶166 and ¶214.

reporting period. Consider alternative recordings of a *valuation gain* on a financial asset:

- *Alternative A.* The gain is recorded as revenue in the profit-or-loss accounts, which results in an increase in profit and, therefore, in retained earnings (within the category of shares and other equity) for the reporting period.
- *Alternative B.* The gain is recorded as an increase in *valuation adjustment* (within the category of shares and other equity) for the reporting period.<sup>26</sup>

**2.66** Alternative A results in an increase in *retained earnings* and no change in *valuation adjustment*, whereas Alternative B leads to an increase in *valuation adjustment* and no change in *retained earnings*. The increase in *shares and other equity* is of the same amount when either alternative is applied. The total amount of revaluations is needed for the monetary statistics. However, the monetary statistics methodology imposes no rules with respect to recording of gains or losses through the profit-or-loss accounts or directly into *valuation adjustment* within *shares and other equity*.

**2.67** To obtain source data for the monetary and financial statistics, the securities valued at amortized cost need to be restated at market or fair value. The fair value replaces the amortized cost in the recording of the outstanding amount of the securities, and a contra-entry in the amount of the difference between the fair value and the amortized cost (positive for a gain, and negative for a loss) needs to be recorded as a valuation adjustment, either as an increase/decrease in *retained earnings* or as an increase/decrease in *revaluation adjustment* in *shares and other equity*. Similarly, a loan may be valued at fair value in accordance with the provisions of *The Fair Value Option* amendment to IAS 39. For the monetary statistics, the loan will need to be restated at book value, and a contra-entry (amounting to the positive or negative difference between the book value and the fair value of the loan) would need to be recorded, either in *retained earnings* or *valuation adjustment*. The rec-

ommendation in this *Guide* is that, in all such cases, the contra-entry be recorded in either *retained earnings* or *revaluation adjustment*, whichever recording is practical and in accordance with national policy.

## Data from an Information System

**2.68** The general ledger provides a summary of all entries in the balance sheet and profit-or-loss accounts of the institutional unit. More disaggregated data are contained in subsidiary ledgers that are linked to the general ledger. A major function of the general and subsidiary ledgers is to provide information for the day-to-day management and control of a corporation. The general and subsidiary ledgers also support preparation and auditing of the corporation's financial statements, in accordance with the accounting standards; and compliance with reporting requirements of regulatory/supervisory agencies and national statistical agencies.

**2.69** Each account in the general and subsidiary ledger has an accounting code, or reference number, and a descriptor. Large and complex enterprises have thousands of account codes in their general and subsidiary ledgers. The accounting codes and descriptors are obtained from the enterprise's *chart of accounts*, or *plan of accounts*. The charts of accounts of financial and nonfinancial corporations reflect both the complexity of their activities and the multipurpose nature of the data.

**2.70** As a matter of national policy in some countries, a chart of accounts is standardized across institutional units within an individual subsector of the economy. For example, ODCs may be required to use the same chart of accounts. However, statistical authorities in other countries are not authorized to mandate expansions or other revisions in corporations' charts of accounts. In these countries, each corporation designs its own charts of accounts, subject only to the requirements that financial statements be prepared in accordance with the national financial reporting standards and that accurate and timely data be reported to the appropriate authorities.

**2.71** The ordering of assets and liabilities within a chart of accounts is somewhat arbitrary, but two general principles usually apply—asset/liability ordering by (1) relative liquidity of the asset/liability and/or (2) relative importance of the asset/liability to

<sup>26</sup>*Retained earnings*, *valuation adjustment*, and the other component of *shares and other equity* are described in the *MFSM*, Chapter IV: "Retained earnings constitute all after-tax profits that have not been distributed to shareholders or appropriated as general or special reserves . . . *Valuation adjustment* shows the net counterpart to changes in the value of assets and liabilities on the balance sheets of financial corporations [to the extent that such changes in value have not been routed through the profit or loss accounts]. (*MFSM*, ¶166, boldface text in brackets added for clarification.)

the operation of the enterprise. Different orderings of accounts for financial and nonfinancial corporations are based on dissimilarities of their operations and their balance sheets. The ordering of FCs' assets is usually by relative liquidity, whereas the ordering of nonfinancial corporations' assets usually is by relative importance. Deposit, loan, and securities holdings are major asset categories for DCs, whereas such investments may constitute relatively minor accounts in a manufacturing firm, when compared with its holdings of nonfinancial assets such as equipment, raw material, and unfinished and finished inventory.

**2.72** The profit-or-loss accounts within a chart of accounts consist of revenue, cost-of-goods-sold, and expense accounts. The category of *cost of goods sold* is used to account for the production and/or sale of goods by nonfinancial corporations engaged in the manufacture and/or sale of goods at the wholesale or retail levels. *Cost of goods sold* usually does not appear, or is a relatively minor item, in charts of accounts of corporations that specialize in the sale of financial or nonfinancial services.

**2.73** *Double-entry accounting* can be implemented in the compilation of the source data for the monetary and financial statistics when the data for the monetary statistics are incorporated in, or linked directly to, the general and subsidiary ledgers. The double-entry accounting rule requires that every entry in the expanded information system must be accompanied by a contra-entry or set of contra-entries that will ensure that the balance-sheet identity—assets equal liabilities (inclusive of shares and other equity)—is always satisfied. Double-entry accounting ensures that, by construction, the balance-sheet accounts and the profit-or-loss accounts in the accounting system are reconciled. Double-entry accounting is also the framework for the monetary and financial statistics, if all stock and flow data are to be reconciled.

**2.74** The flow data in an accounting system are defined by debits and credits to the accounts. The *trial balance* is a summary of all debits and credits recorded in the general ledger of the accounting system. If all entries in the accounts are accurate, the sum of all debits always equals the sum of all credits. If debits do not equal credits, the resulting error will be revealed in a trial balance that does not balance.

**2.75** The effects of debits and credits to the various categories of accounts are shown in Box 2.4. In some

**Box 2.4. Debits and Credits to the Accounts**

Account Type	Debit	Credit
Assets	<i>Increases</i>	<i>Decreases</i>
Liabilities <sup>1</sup>	<i>Decreases</i>	<i>Increases</i>
Revenue	<i>Decreases</i>	<i>Increases</i>
Expenses	<i>Increases</i>	<i>Decreases</i>

<sup>1</sup>Includes shares and other equity.

cases, a single debit entry and a single credit entry are needed to record a transaction. For example, suppose an ODC extends a loan in the amount of 100 to a borrower who is also its depositor. The ODC will record the claim by debiting the loan account in the amount of 100 and will record the borrower's receipt of the loan proceeds by crediting the borrower's deposit account (a liability of the ODC) in the amount of 100. This transaction involved only an asset account (loans) and a liability account (deposits). In other cases, a transaction involves two entries in the asset accounts. For example, suppose a financial corporation purchases 100 of securities from a nonresident and provides payments from a transferable deposit account in an overseas (nonresident) DC. The FC debits an asset account (*securities—nonresident*) in the amount of 100, and credits another asset account (*transferable deposits—nonresident*) in the amount of 100.

**2.76** Some transactions involve debits to both an asset or liability account and a revenue or expense account. An example is the recording of accrued interest in the amount of 10 for a loan held by an FC. The accrued-interest subaccount associated with the asset account (loan) is debited (10), and the revenue account for accrued interest on loans is credited (10). Instead, suppose that accrued interest of 10 is to be posted for a deposit liability. The accrued-interest subaccount associated with the deposit account is credited (10), and the expense account for accrued interest on deposits is debited (10).

**2.77** Debits and credits to the asset/liability accounts, when aggregated and compiled on a net basis, provide transaction data for the net purchase or sale (or other form of partial or total liquidation) of a category of assets and the net incurrence or repayment of a category of liabilities. Credits and debits to the revenue and expense accounts provide a rich source of

flow data for gains and losses on financial assets and liabilities.<sup>27</sup> Suppose an FC sells securities to one of its depositors, who agrees to pay 900 for the securities. Suppose the securities are currently valued at 850 in the accounts of the FC. The sales transaction entry in the accounts of the FC would be a credit (850) in the asset account for the securities (removing the securities from the accounts), a debit (900) in the liability account for the customer's deposits (remunerating the FC for the sale), and a credit (50) in the revenue accounts to record the gain realized on the securities sale.

**2.78** Instead, suppose that the FC intends to continue to hold the securities, but needs to revalue them from a market price of 850 to the market price of 900 that prevailed at the end of the reporting month. The FC posts a debit (50) in the asset account to show an increased value for the securities, and a credit (50) in revenue to account for the holding gain on the securities. Suppose that, instead of increasing during the month, the market value of the securities declined from 850 to 800. The FC records a credit (50) to the asset account to reflect the reduced value for the securities, and records a debit (50) in the expense account for holding losses on securities.

**2.79** Flow data for the monetary statistics can be based on the debit/credit entries to the balance-sheet and profit-or-loss accounts in the FC's ledgers. A general or subsidiary ledger account appears for each line item in the sectoral balance sheet of the FC (see Table 7.1 in the *MFSM*, pp. 80–86). Separate asset/liability accounts appear for currency, deposits, securities other than shares, loans, shares and other equity, insurance technical reserves, financial derivatives, and other accounts receivable/payable. The general and subsidiary ledgers contain a hierarchy of accounts that correspond to all types of data disaggregation in the sectoral balance sheet—that is, disaggregation by denomination of currency (national or foreign), type of deposit (transferable or other), and type of other accounts receivable/payable (trade credit and advances or other). Asset accounts are further subdivided by economic sector of debtor, as specified in the sectoral balance sheet. A similar hierarchy of accounts and subaccounts is used for

the disaggregation of liabilities, including separation of deposits and securities other than shares into separate categories for *Included in broad money* and *Excluded from broad money*.

**2.80** General or subsidiary ledger subaccounts can be used to account for accrued interest on each category of interest-bearing asset or liability—specifically, loans, securities other than shares, and deposits (other than non-interest-bearing transferable deposits). These subaccounts would track the additions to accrued interest—interest earned but not yet due for payment—and reductions in accrued interest that result when accumulated accrued interest becomes due for payment and is paid (see Box 2.5).<sup>28</sup> The amounts of accrued interest in the subaccounts would be incorporated into the outstanding balances for the interest-bearing assets and liabilities, as well as in the accrued-interest data in the *Memorandum items* accompanying the sectoral balance sheet (see Chapter 7 of this *Guide*). Illustrative sets of subaccounts for accrued interest are shown in Annex 2.1.

**2.81** Profit-or-loss accounts in the general and subsidiary ledgers can be disaggregated to provide gain-or-loss data for the monetary and financial statistics. For the monetary and financial statistics, gains and losses in the profit-or-loss accounts do *not* need to be disaggregated on the basis of whether the gains/losses have been realized or are unrealized (that is, are holding gains/losses),<sup>29</sup> or on the basis of whether the gains/losses resulted from price changes or from exchange rate changes. However, source data for gains and losses in the monetary statistics need to be disaggregated in accordance with the line items in the sectoral balance sheet in Table 7.1 of the *MFSM* (pp. 80–86). The principal disaggregations

<sup>27</sup>Assuming the gains/losses are recorded through the profit-or-loss accounts. If recorded directly in equity, source data for the gains and losses are contained in the *valuation adjustment* subaccount within *shares and other equity*.

<sup>28</sup>The monthly data for the monetary statistics include accrued interest in the outstanding amounts of interest-bearing deposits. The monthly statement that a depository corporation provides to a depositor usually does not include accrued interest, but rather shows only the amount of interest recorded in the depositor's account at the time when the interest became due for payment. Separate subaccounts for accrued interest on deposits facilitate the reconciliation of the deposit data in which accrued interest is included and excluded, respectively.

<sup>29</sup>For an individual category of asset or liability in the monetary and financial statistics, the net gain or loss (that is, *Valuation change*) for a period is equal to the *sum* of (1) unrealized gains and losses from revaluing assets/liabilities still in the accounts at the end of the period and (2) realized gains and losses on assets/liabilities that, by virtue of having been sold or otherwise liquidated, are not in the accounts at the end of the period.

**Box 2.5. Accounting for Accrued Interest: Examples**
**Loan**

Loan amount: **1,000** Contract date: March Maturity: 2 years

Interest payable semiannually. Repayment of all principal at maturity.

Interest: 6 percent per annum.

Interest amount: **30** per payment period (**5** per month).

Borrower is a depositor who will make loan payments from a transferable deposit account at the lender.

Accrued interest (end-July, five months): **25**

Loan account (assets)	<b>1,000</b>
Accrued interest account (assets)	<b>25</b>
Outstanding amount (carrying amount)	<b>1,025</b>

Accounting entries for interest accrual

Accrued interest (assets)	Debit <b>25</b>
Interest revenue (profit or loss)	Credit <b>25</b>

Interest payment (August 31): **30**

Loan account (assets)	<b>1,000</b>
Accrued interest account (assets)	<b>0</b>
Outstanding amount (carrying amount)	<b>1,000</b>

Accounting entries for interest payment

Accrued interest (assets)	Credit <b>5</b> (from payment of accrued interest)
Interest revenue (profit or loss)	Credit <b>5</b> (from payment of August interest)
Deposit withdrawal (liabilities)	Debit <b>30</b> (payment by borrower)

**Deposit similar to the loan in the above example**

Time deposit amount: **1,000** Contract date: March Maturity: 2 years

Interest payable semiannually. Repayment of all principal at maturity.

Interest: 6 percent per annum.

Interest amount: **30** per payment period (**5** per month).

Accrued interest (end-July, five months): **25**

Deposit account (liabilities)	<b>1,000</b>
Accrued interest account (liabilities)	<b>25</b>
Outstanding amount (carrying amount)	<b>1,025</b>

Accounting entries for interest accrual

Accrued interest (liabilities)	Credit <b>25</b>
Interest expense (profit or loss)	Debit <b>25</b>

Interest payment (August 31): **30**

Deposit account	<b>1,000</b>
Accrued interest	<b>0</b>
Outstanding amount (carrying amount)	<b>1,000</b>

Accounting entries for interest payment

Accrued interest (liabilities)	Debit <b>25</b> (from payment of accrued interest)
Interest expense (profit or loss)	Debit <b>5</b> (from payment of August interest)
Deposit (liabilities)	Credit <b>30</b> (payment to depositor)

of gains/losses are by (1) asset/liability category,<sup>30</sup> (2) national/foreign currency of denomination, and (3) economic sector of creditor/debtor. No similar gain-or-loss subaccounts are needed for national-

<sup>30</sup>For deposits and securities (other than shares) issued by depository corporations, disaggregation based on the liability categories of *Included in broad money* and *Excluded from broad money*, as well as disaggregation by national/foreign currency of denomination and by economic sector, is needed.

currency-denominated loans and deposits, given that these categories of assets and liabilities are recorded at book value in the *MFSM* methodology. Illustrative profit-or-loss subaccounts for gains and losses (*Valuation changes* in the context of the monetary statistics) are shown in Annex 2.2.

**2.82** For the monetary and financial statistics, all revaluations (gains or losses) that have been recorded

directly in the equity account need to be included in the data for the total valuation changes for individual categories of assets and liabilities. The subaccounts for gains and losses recognized directly in equity, illustrated in Annex 2.2, have the same classifications—by asset/liability category, national/foreign currency of denomination, economic sector, etc.—as the subaccounts for gains and losses through the profit-or-loss accounts.<sup>31</sup> Having disaggregated the data for gains and losses in each set of subaccounts, the total valuation change (gain or loss) for a particular category of assets or liabilities is given by the *sum* of (1) the net gain or loss through profit or loss and (2) the net gain or loss that has been recorded directly in equity.

**2.83** In the monetary statistics, net profit or loss for the period is shown as the *change in retained earnings*, and accumulated profits or losses at the beginning and end of the period are referred to as the *opening balance of retained earnings* and *closing balance of retained earnings*, respectively. In principle, profit or loss can be officially transferred to retained earnings at the end of each period. However, under national financial reporting standards in many countries, profit or loss is transferred to retained earnings on a quarterly or annual basis only. In the periods between the transfers to retained earnings, profit or loss is recorded on a cumulative basis in a separate account that has a descriptor such as *accumulated profit/loss for the period* or *results for the period*, where *period* refers to the entire period since profit/loss was last transferred to retained earnings. In the data reported for the monetary statistics, *retained earnings* is defined as the total amount of net profit or loss that has accumulated in the current and previous periods, including the amount in an account such as *results for the period*, which has not yet been officially transferred to the retained earnings account.<sup>32</sup>

**2.84** The profit or loss for the period, inclusive of the net amount of gain or loss, is disaggregated in the flow categories of *transactions* (T) and *valuation changes* (VC) within *shares and other equity*. These

<sup>31</sup>In the context of the sectoral balance sheet of a financial corporation, *Valuation adjustment* within *Shares and other equity*, shown in the *MFSM*, Table 7.1 (p. 85), is the account that needs to be disaggregated.

<sup>32</sup>“Retained earnings constitute all after-tax profits that have not been distributed to shareholders or appropriated as general or special reserves” (*MFSM* ¶166).

are the contra-entries for the transactions (for example, revenue received, expenses paid, and accrued revenue and expense items) and valuation changes, on a net basis, for all financial assets and all liabilities outside the *shares and other equity* account. Within the *shares and other equity* account, the net amount of all *transactions* (other than transactions arising from issuance or redemption of equity) is recorded in the *transactions* column of the retained-earnings line, and the net amount of gain/loss through the profit-or-loss accounts is recorded in the *valuation changes* column of the retained-earnings line. A separate *OCVA* (*other changes in the volume of assets*) column of retained earnings is used for any *OCVA* that are recorded through profit or loss. The *shares and other equity* account contains a separate account, *valuation adjustment*, for the recording of the net gain/loss recognized directly in equity.

**2.85** The net amount of gain/loss (*valuation change*) through the profit-or-loss accounts is calculated as the sum of the gains and losses in the valuation subaccounts, as illustrated in Annex 2.2. The net amount of transactions for the period is equal to the net profit or loss for the period *minus* the *sum* of (1) net amount of gain/loss through profit or loss and (2) *OCVA*.

**2.86** A numerical example of the stock and flow data for the *shares and other equity* account of an FC (other than the central bank) is provided in Box 2.6. Shown are postings for (1) *Transactions* and *Valuation changes* that are flow components of the change in retained earnings and (2) *Valuation changes* in the subaccount for *Valuation adjustment* within shares and other equity. Also shown are entries associated with (1) issuance of additional equity shares (a transaction), (2) expense from an addition to *Provisions from losses on impaired financial assets*, and (3) appropriation of retained earnings to *General and special reserves*. Each of the last two categories is classified as an *OCVA*.<sup>33</sup>

<sup>33</sup>In the 1993 *SNA* and *MFSM* methodology, *OCVA* entries are used to record asset/liability changes that do not rise from transactions or valuation changes. The *OCVA* account is described in the *MFSM*, ¶193–195. Appropriations from *retained earnings* to *general and special reserves* do not appear within the framework of the 1993 *SNA*, which does not include the components of the shares and other equity. In the monetary statistics, the retained-earnings appropriation to *general and special reserves* is treated as an *OCVA* within the category of *changes in the classification of assets and liabilities*. *OCVA* entries arising from other events are described in Chapters 5 and 7 of this *Guide*.



**Box 2.6. Shares and Other Equity Account: Example of the Stock and Flow Data for a Period**

	OB	T	VC	OCVA	CB
Shares and other equity	1,013,000	3,600	50	-75	1,016,575
Funds contributed by owners	1,000,000	3,200 [see (5)]			1,003,200
Retained earnings	10,000	400 [see (1)]	100 [see (2)]	-375 [see (3) and (6)]	10,125
General and special reserves	1,000			300 [see(6)]	1,300
Valuation adjustment	2,000		-50 [see (4)]		1,950

**Stocks:** OB = Opening balance

CB = Closing balance

**Flows:** T = Transactions

VC = Valuation changes

OCVA = Other changes in volume of assets

**Profit for the period = 425**

(1) T = transactions (other than new issue of shares) = 400

(2) VCI = Gain or loss through profit or loss = 100

(3) OCVA1 = Retained-earnings effect from expense of provision for losses on impaired financial assets = -75

(4) VC2 = Gain or loss recognized directly in equity = -50

(5) EQ = Issuance of equity shares = 3,200

(6) OCVA2 = Appropriation of retained earnings to increase General and Special Reserves = 300

## Other Source Data

### Systematic Identification of Data Reporting Requirements

**2.87** Compilers need to ensure that the data for the monetary and financial statistics are reported by FCs, while respecting the government's concerns and data reporter's interests in statistical reporting burdens that are minimized to the extent possible. Many countries have instituted administrative procedures to ensure that new and existing regulatory burdens, including those arising from statistical reporting, are monitored and subjected to reassessment on a regular basis. For example, Regulation 2533/98 concerning the collection of statistical information by the European Central Bank (ECB) requires that the ECB, without prejudice to the fulfillment of its statistical reporting requirements, "... shall minimise the reporting burden involved, including by using existing statistics as far as possible" (European Communities, 1998). Similarly, the Bank of England *Statistical Code of Practice* (Bank of England, 2004) states that "Data suppliers' costs will be contained, subject to the need to produce statistics that are fit for their purpose." Compilers need to make judgments about the most efficient means of implementing the data reporting requirements, striking an appropriate balance between the imposition of reporting costs and the quality of the data obtained.

**2.88** An approach to evaluation of reporting requirements is application of cost-benefit analysis (CBA).

Standard cost-benefit techniques, as applied in public sector project appraisals, are designed for quantification of the costs and benefits of alternative options and for selection of the option that has the maximum social value. Application of CBA to statistical reporting requires some adaptation of the techniques, given the inherent subjectivity in valuing the benefits of producing data that meet the quality standards.<sup>34</sup>

**2.89** Components of a CBA for the reporting of monetary and financial statistics include:

- Systematic identification of all potential statistical reports;
- Estimation of reporting costs for each statistical report;
- Assessment of benefits measured as the incremental contribution of each statistical report to the overall quality of official statistics; and
- Formulation of decision rules for determining which statistical reports are to be approved on the basis of costs and benefits.

**2.90** Surveys of reporting entities are used to identify the available data in their general and subsidiary accounting ledgers and additional required data that, though necessary for the monetary and financial statistics, are not required for compliance with national financial reporting standards or existing data reporting requirements imposed by regulatory and supervi-

<sup>34</sup>For descriptions of recent developments in the application of CBA to statistical reporting, see Holder (2005, 2006).

sory authorities. Defining the additional data needs is the starting point for identifying the incremental costs of statistical reporting that are directly attributable to the requirements for the monetary and financial statistics.

**2.91** The objective for the statistical authorities is the establishment of data reporting requirements that are efficient in terms of the lowest reporting costs for achievement of specified standards of data quality. Efficiency of data reporting implies that overlapping data reporting is to be avoided through elimination of double reporting of the same or similar data.

**2.92** Techniques for estimation of statistical reporting costs recognize that aggregate reporting costs depend on the number of reporting entities and the reporting burden on each reporter. Statistical reporting compliance costs can be estimated through the use of periodic surveys of data reporters, who are asked to estimate the total staff time spent and non-staff costs incurred in complying with statistical reporting requirements. Staff-time estimates can be provided for individual employment grades and earning levels so that representative estimates of the total staff costs of statistical reporting can be calculated.

**2.93** Statistical reporting costs include both recurrent costs and fixed costs. Consideration only of recurrent costs may lead to underestimation of the total costs of imposing new or expanded requirements for statistical reporting, given the significant costs that statistical reporters may incur in establishing internal systems for meeting the reporting requirements. Estimates of recurrent-cost savings alone may provide sufficient information for decisions about reduction or elimination of existing reporting requirements, given that programming and other costs that financial corporations incur for the streamlining of data reporting may be relatively small.

**2.94** Assessment of the benefits of reported data, though subjective, is amenable to systematic analysis. Surveys of monetary and financial statistics users such as the central bank, central government, academics, media, and financial sector analysts can be used to identify the most highly valued statistics. The contribution of each reporting requirement to the derivation of a major statistical output also can be assessed. Importance can be judged by the incremental impact of the reported data on the accuracy, reliability, and other qualitative dimensions of

the major statistical outputs derived from the underlying data.

**2.95** To ensure consistency in the benefit assessment of data collections, compilers may consider the adoption of standardized evaluation tools such as numerical scoring that is weighted by various criteria that encompass the principal benefits from compliance with national and international statistical reporting requirements.

**2.96** Decision rules need to be structured so as to recognize that costs and benefits are unlikely to be assessed in the same quantitative terms. One approach is to set a budget ceiling for reporting compliance costs and choose from a ranked set of potential data collections so as to maximize total benefits for a predetermined limit on total compliance costs. An alternative approach is to impose minimum quality standards that the reported data must meet or exceed.

### **Institutional Coverage of the Monetary Statistics**

**2.97** The quality and analytical usefulness of the monetary statistics depend on the institutional coverage of the *ODCS* (Other Depository Corporations Survey) and the *OFCS* (Other Financial Corporations Survey). The recommendation in this *Guide* is that *the institutional coverage of the monetary statistics include all large financial corporations and as many smaller ODCs and OFCs as is consistent with the benefits and compliance costs of data reporting in the national context.*

**2.98** The institutional coverage of monetary data reporting by ODCs and OFCs is likely to depend on the (1) number and size distributions of ODCs and OFCs in a country; (2) the range of OFCs' activities; (3) the assortment of stock and flow data that ODCs and OFCs are required to report; and (4) the periodicity of the data and frequency of data reporting.

**2.99** The requirement of monthly data reporting by ODCs may apply to all ODCs in the financial sector, or may exclude the smallest ODCs. Reporting by all ODCs (sometimes called universal reporting, or census reporting)—provides the most comprehensive data for the subsector, but imposes the highest total costs of obtaining the aggregate data. If the size distribution of the ODCs is highly skewed, a substan-

tial reduction in reporting costs may be obtainable without significant loss of data accuracy and comprehensiveness, if the smallest ODCs are excluded from some or all requirements for relatively frequent reporting.

**2.100** Exemption of small institutional units from the reporting requirements is known as “truncated reporting,” “top-slicing,” or “cutting the tail.” The truncation can be defined explicitly, by setting a minimum-size threshold for reporting institutions, or implicitly, by setting a minimum institutional coverage, measured as a percentage of the estimated total for a key data aggregate such as total assets of the ODC subsector. The latter approach has been adopted by the European Union. See Regulation (EC) No. 2423/2001 of the ECB of 22 November 2001 concerning the consolidated balance sheet of the monetary financial institutions sector (ODC subsector), which requires that each national central bank in the Eurosystem ensure 95 percent coverage, by balance-sheet size, of their ODC subsectors.

**2.101** Exemption of small OFCs from reporting requirements may be especially cost-effective for countries that have large numbers of small OFCs for which detailed reporting on a frequent basis would create substantial reporting burdens. For both ODCs and OFCs, truncated requirements for high-frequency reports can be combined with universal reporting at less frequent intervals. For example, small ODCs could be exempted from monthly reporting, while being required to comply with requirements for quarterly data reporting. Similarly, large OFCs could be required to report quarterly data, whereas small OFCs in the “tail” could be subjected to annual data reporting only.

**2.102** If truncated reporting is adopted, compilers will need to conduct periodic reviews of the minimum-size threshold in relation to the FCs that have been exempted from reporting. The need for such reviews is prompted by the evolution of the FCs sector, resulting from growth (or decline) of individual units and structural changes imparted by mergers, acquisitions, reorganizations, and failures of FCs.

**2.103** Census surveys—that is, data questionnaires sent to all ODCs and all OFCs, respectively—provide information that is useful in determining the institutional coverage of data reporting for the monetary statistics. If truncated reporting is adopted, the cen-

sus surveys can be repeated at specified intervals to obtain the information needed for periodic revisions in the list of financial corporations excluded from the data reporting requirements. Data from the census surveys are used in implementing the decision rules pertaining to the conditions for adding or deleting ODCs and OFCs from the respective groups of data reporters.

### Data Adjustment and Estimation

**2.104** Alternative methods of data adjustment and estimation need to be evaluated to determine those that are the most efficient and cost-effective for completion of the data sets for the monetary statistics. This *Guide* recommends that, *at an initial stage, the monetary statistics compilers identify each type of data adjustment/estimation that is appropriate for completion of the entire data set for the monetary statistics. For each category of data adjustment/estimation, a decision is needed as to whether the monetary statistics compilers or the financial corporations should produce the adjusted/estimated data.*

**2.105** In addition to the basic trade-offs between compliance costs imposed on data reporters and costs borne by the monetary statistics compilers, consideration needs to be given to the efficiency of the data production and the resulting quality of the data. This *Guide* recommends that *data reporters undertake all data adjustments/estimations that can be efficiently implemented at the level of the individual reporters.* Examples might include restatement at market or fair value for securities that have been valued at amortized cost in FCs’ accounting systems and estimation of fair values for financial derivatives that are not traded in active markets. By performing the adjustments/estimations, each reporting institution can incorporate the adjusted/estimated data (and corresponding contra-entries) in its reported data in a manner that preserves the balance-sheet identity—total assets equal to total liabilities—for the reported data. Inclusion of the adjusted/estimated data in the reported data imposes a quality check on the reported data, which must satisfy the balance-sheet identity after the adjusted/estimated data have been incorporated.

**2.106** Some data adjustments/estimations may be delegated to the monetary statistics compiler, particularly when the adjustments/estimations can be made more efficiently (and sometimes more accu-

rately) using aggregated data rather than the separate data reported by each FC. Such procedures may be especially cost effective for disaggregation by economic sector for a particular category of financial assets or liabilities<sup>35</sup> and for estimation of flow data, using stock data.

**2.107** Monetary statistics compilers are responsible for data interpolation in circumstances in which not all data reporters provide data with the regular periodicity specified for the monetary statistics. For example, using a modified form of truncated data reporting, most ODCs may be required to report monthly data, but some small ODCs may report quarterly data only. The compilers would be responsible for estimation of monthly data for all ODCs, which would include monthly estimates that have been interpolated from the quarterly data reported by the small ODCs. Similarly, the compilers would be responsible for using annual data, as reported by small OFCs, to produce quarterly data estimates based on interpolation, when quarterly is the standard periodicity for the OFC data.

### Flow Data Estimation

**2.108** In the *MFSM* and this *Guide*, financial flows—period-to-period changes in the outstanding amounts of financial assets and liabilities—are composed of transactions, revaluations, and OCVA.<sup>36</sup> Disaggregation of stock data into the separate flow components is a major area for application of estimation techniques. The sophistication of an FC's information system may be such that some or all flow data may be compiled and reported directly from its financial records. For some or all FCs (particularly, for many OFCs), flow data may need to be estimated. Data reporters may be required to provide some flow data, but the monetary statistics compilers are likely to be delegated responsibility for estimation of a substantial part of the flow data, through use of the reported data and estimation techniques.

<sup>35</sup>For example, an FC has data on its total issuances, if any, of bearer-type securities. However, it does not have data disaggregated by economic sector of creditor (that is, current holder of the securities), if some of its bearer-type securities have been traded in secondary markets. The monetary statistics compilers are in a position to estimate the disaggregated data more efficiently and accurately than the individual reporters, using information available only at the aggregate level of securities holdings. On bearer-type securities, see Chapter 5, ¶5.113–5.118.

<sup>36</sup>The flow data are described in the *MFSM*, Chapter V (¶191), and this *Guide*, Chapter 5 (¶5.8–5.21).

**2.109** Flow data can be compiled directly from stock data for financial assets and liabilities that are not subject to revaluation (see Chapter 5, ¶5.14). Either more detailed data or the application of estimation techniques is required, when flow data for a financial asset or liability must be decomposed into transactions and revaluations (as well as, possibly, OCVA).<sup>37</sup> This decomposition can be based in estimation methods that utilize simplifying assumptions about the behavior of the market price or (fair value) of a financial asset/liability and, for a foreign-currency-denominated financial asset/liability, the behavior of the exchange rate during the period.

**2.110** The assumptions of a basic technique for estimating the flow components for an asset or liability denominated in national currency are contained in the *1993 SNA*, ¶12.95:

The simplest and most convenient assumptions to make are that both the prices and quantities of the asset change at constant linear rates between the beginning and end of the accounting period; that is, that the sequence of prices and quantities linking the opening and closing levels are simple arithmetic progressions.<sup>38</sup>

**2.111** Simplifying assumptions can also be used in the estimation of transactions and revaluations (in the presence or absence of OCVA) for financial assets and liabilities for which valuation changes arise from exchange rate changes during the period. These estimation methods are described in Chapter 5 (¶5.22–5.33).<sup>39</sup>

### Validation and Plausibility Testing of Reported Data

**2.112** Efficient and reliable mechanisms for ensuring the quality of source data reported by financial corporations are fundamental to the compilation of monetary and financial statistics. In their capacity as data analysts, compilers need to maintain the quality standards required for aggregate outputs by checking

<sup>37</sup>On data requirements for direct compilation of transactions and revaluations, see Chapter 5, ¶5.3–5.21.

<sup>38</sup>See the continuation of ¶12.95 of the *1993 SNA* for the estimation equations, which are based exclusively on the beginning-of-period, end-of-period, and period-average prices and quantities of the asset.

<sup>39</sup>On the estimation of flow data for monetary financial institutions (ODCs) in the Eurosystem, see European Central Bank (2006a, 2006b).

for large or unusual movements in reported source data. Quality control is exercised through *data validation* and *plausibility testing*, which are the principal stages of *data cleansing*—the control process through which reporting errors are identified and corrected to the point where the statistical outputs are fit for the analytical purposes for which the data are intended.<sup>40</sup>

**2.113** Data validation can begin as soon as data are received. Validation checks can be largely automated where reported data are in electronic form.<sup>41</sup> Validation provides basic checks on the integrity of source data by (1) confirming that all required data cells have been completed; (2) checking that all balance-sheet accounting identities are satisfied; and (3) ensuring that subtotals and totals sum correctly.<sup>42</sup>

**2.114** Plausibility testing may commence as soon as validation checks have been completed. This phase of data cleansing is aimed at identifying those data items that have suspicious characteristics that may reflect reporting errors, even though the validation checks have shown the data to be internally consistent. Plausibility testing can be viewed as a three-phase process:

- *Phase 1. First-round, often automated, filtering* is used to identify source data that exhibit behavior that may deserve more detailed investigation.
- *Phase 2. Diagnostic testing* is used to determine which data from among those identified in Phase 1 should be directly edited or queried with the data provider.
- *Phase 3. A second round of diagnostic testing* may be used after compilation and initial analysis of the data from all reporters to reveal outlier behavior relative to peer group norms.

<sup>40</sup>On data quality control and related issues, also see Bank of England (2006), Chapters 11 and 12.

<sup>41</sup>For reporters who send standardized report forms, the data submission can be automated through electronic data transmission and storage. Data transmission can be via private networks or over the Internet (subject to security precautions including encryption, if necessary). Some central banks have compulsory systems of electronic data transmission, at least for large reporting institutions. Validation checks specified by the compilers can be built into the software for preparing and transmitting the reported data, thereby allowing each reporter to perform the basic validation prior to transmitting the data.

<sup>42</sup>If the reported data include both flows and stocks, summing-up tests may be applied separately to the stock and flow data, as well as to relationships between the flow data and the stock data.

**2.115** First-round filtering may be based on a variety of prespecified criteria determined by the data analyst. Filters may have single or multiple criteria that are linked through either an “and” rule or an “or” rule. Commonly applied criteria trigger an alert if a period-to-period change in a balance-sheet position exceeds a specified absolute value; exceeds a specified percentage movement; or causes the reported position to show, or cease showing, a zero position.

**2.116** Diagnostic testing of the Phase 1 alerts may be based entirely on an analyst’s judgment or can utilize specified computational tests. An example of the latter would be an examination of the relationship between the data under review and another data item(s), elsewhere in the same reporter’s submission, where some form of stable relationship would normally be observable.

**2.117** Second-round diagnostic testing is used to review the data from the individual reporter in relation to the market data (that is, data for all reporters). The testing in Phases 1 and 2 assesses the plausibility of the reporter’s data on the basis of the reporter’s own past performance. In the second round, the diagnostic testing is concerned with whether the reporter’s performance is unusual relative to that of a peer group. Though extremely valuable, second-round testing requires the availability of reported data from all reporters or from a major subset of the reporting population. Depending on the sequencing and timing of the reporting, Phase 3 testing may need to be delayed until all or nearly all reporting for a given period has been completed.

**2.118** Plausibility testing can be subjected to cost/benefit analysis. The objective is to expend resources only insofar as the testing is used to identify data inaccuracies that materially affect the analytical content of aggregate outputs. Plausibility testing is carried out to protect the quality of the aggregate data through investigation of the behavior of each reporter’s data. However, pursuit of potential reporting errors without regard to materiality can impose reporter and compiler costs that have few, if any, offsetting benefits and, in particular, may lead to an overabundance of first-round filtering alerts and follow-up testing. Efficient decision rules for specifying and applying the first-round filtering can be established. Some general principles are suggested:

- The setting of *absolute movement rules* should focus on the materiality of the cell item to the quality of the aggregate output to which the data contribute. Data should not be subjected to further investigation if any reporting errors that potentially could be uncovered by such testing would be too small to materially affect the interpretation of the aggregate data. A commonly used pragmatic approach applies a movement rule equivalent to 10 percent of the computed standard error of the aggregate output to which the data contribute.
- Application of the *percentage-movement rule* may focus on changes in the individual reporter's data without regard for the impact on the aggregated data. Rules should be specified carefully to ensure that the percentage-movement rule encompasses a normal range of variability in the data for each reporter, but do not trigger an exorbitant number of plausibility alerts in the data of very small reporters. The focus may be on percentage-change thresholds designed to signal the unusual movements in the data in large balance sheets.
- The use of a "*To/from zero*" rule—a hybrid between validation and plausibility testing—has been found by some compilers to be a useful means of alerting when data inadvertently have been entered in the wrong line of the reporting form or when the reporting institution has begun holding a new type of instrument or offering a new financial service.<sup>43</sup>

### Annex 2.1. Accrued Interest in the Accounts

**2.119** Table 2.1 illustrates the accrued-interest accounts that are needed for an ODC that offers a wide range of services. The ODC holds interest-bearing transferable deposits at ODCs located abroad. All transferable deposits of domestic DCs are non-interest-bearing.

**2.120** Some categories of accrued interest shown in Table 2.1 would not be applicable to ODCs that are small or specialized and, therefore, do not have all asset and liability categories in their balance

sheets and, for a given asset or liability category, do not have financial positions with some economic sectors.

**2.121** OFCs typically have more limited sets of accrued-interest accounts. Table 2.2 illustrates the categories for an other financial intermediary that extends loans to resident sectors, holds a diversified portfolio of securities other than shares, accepts deposits excluded from broad money, borrows in the domestic loan market, and issues securities that are denominated in national currency and are held by resident sectors.

**2.122** Insurance corporations, pension funds, and financial auxiliaries would have relatively short lists of accrued-interest accounts. For the illustration in Table 2.3, a life insurance corporation extends policy loans to other resident sectors (households), holds interest-earning deposits and securities other than shares, and issues liabilities in the form of national-currency-denominated securities other than shares.

### Annex 2.2. Valuation Changes in the Accounts

**2.123** The tables in this annex illustrate the disaggregation of accounts for valuation changes (gains and losses), as required as source data for the monetary and financial statistics. Table 2.4 illustrates the gain and loss accounts for an ODC engaged in a wide range of activities. Tables 2.5 illustrates a less extensive sets of accounts for an other financial intermediary. Table 2.6 shows the types of accounts that would be most prevalent for a life insurance corporation or a pension fund.

**2.124** The accounts in Tables 2.4–2.6 are applicable to the revenue/expense items for gains/losses in the profit-or-loss accounts and to the *valuation adjustment* account within the *shares and other equity* account, depending on whether gains and losses are posted through profit or loss, or directly to equity. Under national financial reporting standards based on the IFRSs, the accounts in Tables 2.4–2.6 apply mainly to the profit-or-loss accounts, given that the IFRSs stipulate that most types of gains and losses are to be recorded through profit or loss. Under national financial reporting standards not based on the IFRSs, a larger subset of the accounts may

<sup>43</sup>Compilers should be encouraged to report any additional information that the plausibility testing reveals about new activities of individual reporters and emerging market trends within the FC subsector.

Table 2.1. Other Depository Corporation: Accrued-Interest Accounts

<p><b>Assets: Accrued interest (revenue)</b></p> <p><b>Deposits</b></p> <p><b>Transferable deposits (interest-bearing)</b></p> <p><b>In foreign currency</b> Nonresidents</p> <p><b>Other deposits</b></p> <p><b>In national currency</b> Central bank Other depository corporations Other financial corporations Nonresidents</p> <p><b>In foreign currency</b> Central bank Other depository corporations Other financial corporations Nonresidents</p> <p><b>Securities other than shares</b> Central bank Other depository corporations Other financial corporations Central government State and local government Public nonfinancial corporations Other nonfinancial corporations Other resident sectors Nonresidents</p> <p><b>Loans</b> Central bank Other depository corporations Other financial corporations Central government State and local government Public nonfinancial corporations Other nonfinancial corporations Other resident sectors Nonresidents</p> <p><b>Liabilities: Accrued interest (expense)</b></p> <p><b>Deposits included in broad money</b></p> <p><b>Other deposits</b></p> <p><b>In national currency</b> Other financial corporations State and local government Public nonfinancial corporations Other nonfinancial corporations Other resident sectors</p> <p><b>In foreign currency</b> Other financial corporations State and local government Public nonfinancial corporations Other nonfinancial corporations Other resident sectors</p> <p><b>Deposits excluded from broad money</b></p> <p><b>Other deposits</b></p> <p><b>In national currency</b> Central bank Other depository corporations Other financial corporations Central government</p>	<p>State and local government Public nonfinancial corporations Other nonfinancial corporations Other resident sectors Nonresidents</p> <p><b>In foreign currency</b> Central bank Other depository corporations Other financial corporations Central government State and local government Public nonfinancial corporations Other nonfinancial corporations Other resident sectors Nonresidents</p> <p><b>Securities other than shares, included in broad money</b></p> <p><b>In national currency</b> Other financial corporations State and local government Public nonfinancial corporations Other nonfinancial corporations Other resident sectors</p> <p><b>In foreign currency</b> Other financial corporations State and local government Public nonfinancial corporations Other nonfinancial corporations Other resident sectors</p> <p><b>Securities other than shares, excluded from broad money</b></p> <p><b>In national currency</b> Central bank Other depository corporations Other financial corporations Central government State and local government Public nonfinancial corporations Other nonfinancial corporations Other resident sectors Nonresidents</p> <p><b>In foreign currency</b> Central bank Other depository corporations Other financial corporations Central government State and local government Public nonfinancial corporations Other nonfinancial corporations Other resident sectors Nonresidents</p> <p><b>Loans</b> Central bank Other depository corporations Other financial corporations Central government State and local government Public nonfinancial corporations Other nonfinancial corporations Other resident sectors Nonresidents</p>
---	--

Table 2.2. Other Financial Intermediary: Accrued-Interest Accounts

**Assets: Accrued interest (revenue)****Deposits****Transferable deposits (interest-bearing)****In foreign currency**

Nonresidents

**Other deposits****In national currency**

Other depository corporations

**In foreign currency**

Other depository corporations

Nonresidents

**Securities other than shares**

Other depository corporations

Other financial corporations

Central government

State and local government

Public nonfinancial corporations

Other nonfinancial corporations

Nonresidents

**Loans**

Other depository corporations

Other financial corporations

State and local government

Public nonfinancial corporations

Other nonfinancial corporations

Other resident sectors

**Liabilities: Accrued interest (expense)****Deposits excluded from broad money—Other deposits****In national currency**

Other depository corporations

Other financial corporations

State and local government

Public nonfinancial corporations

Other nonfinancial corporations

Other resident sectors

Nonresidents

**In foreign currency**

Other depository corporations

Other financial corporations

State and local government

Public nonfinancial corporations

Other nonfinancial corporations

Other resident sectors

Nonresidents

**Securities other than shares**

Other depository corporations

Other financial corporations

Central government

State and local government

Public nonfinancial corporations

Other nonfinancial corporations

**Loans**

Other depository corporations

Table 2.3. Life Insurance Corporation: Accrued-Interest Accounts

**Assets: Accrued interest (revenue)****Deposits****Transferable deposits (interest-bearing)****In foreign currency**

Nonresidents

**Other deposits****In national currency**

Other depository corporations

**In foreign currency**

Other depository corporations

Nonresidents

**Securities other than shares**

Other depository corporations

Other financial corporations

Central government

State and local government

Public nonfinancial corporations

Other nonfinancial corporations

Nonresidents

**Loans—Other resident sectors****Liabilities: Accrued interest (expense)****Securities other than shares, excluded from broad money—In national currency**

Other depository corporations

Other financial corporations

State and local government

Public nonfinancial corporations

Other nonfinancial corporations

Other resident sectors

Nonresidents



Table 2.4. Other Depository Corporation: Accounts for Gains and Losses (Valuation Changes)

<p><b>Assets: Gains (revenue) or losses (expense)</b></p> <p><b>Foreign currency (exchange rate change)</b></p> <p><b>Deposits (exchange rate change)</b></p> <p><b>Transferable deposits—In foreign currency</b></p> <ul style="list-style-type: none"> <li>Central bank</li> <li>Other depository corporations</li> <li>Other financial corporations</li> <li>Nonresidents</li> </ul> <p><b>Other deposits—In foreign currency</b></p> <ul style="list-style-type: none"> <li>Central bank</li> <li>Other depository corporations</li> <li>Other financial corporations</li> <li>Nonresidents</li> </ul> <p><b>Securities other than shares (price and/or exchange rate change)</b></p> <ul style="list-style-type: none"> <li>Central bank</li> <li>Other depository corporations</li> <li>Other financial corporations</li> <li>Central government</li> <li>State and local government</li> <li>Public nonfinancial corporations</li> <li>Other nonfinancial corporations</li> <li>Other resident sectors</li> <li>Nonresidents</li> </ul> <p><b>Loans denominated in foreign currency (exchange rate change)</b></p> <ul style="list-style-type: none"> <li>Central bank</li> <li>Other depository corporations</li> <li>Other financial corporations</li> <li>Central government</li> <li>State and local government</li> <li>Public nonfinancial corporations</li> <li>Other nonfinancial corporations</li> <li>Other resident sectors</li> <li>Nonresidents</li> </ul> <p><b>Shares and other equity (price and/or exchange rate change)</b></p> <ul style="list-style-type: none"> <li>Central bank</li> <li>Other depository corporations</li> <li>Other financial corporations</li> <li>Public nonfinancial corporations</li> <li>Other nonfinancial corporations</li> <li>Other resident sectors</li> <li>Nonresidents</li> </ul> <p><b>Insurance technical reserves—prepayment of premiums denominated in foreign currency (exchange rate change)</b></p> <p><b>Financial derivatives (price and/or exchange rate change)</b></p> <ul style="list-style-type: none"> <li>Central bank</li> <li>Other depository corporations</li> <li>Other financial corporations</li> <li>Central government</li> <li>State and local government</li> <li>Public nonfinancial corporations</li> <li>Other nonfinancial corporations</li> </ul>	<ul style="list-style-type: none"> <li>Other resident sectors</li> <li>Nonresidents</li> </ul> <p><b>Other accounts receivable</b></p> <p><b>Trade credit and advances denominated in foreign currency (exchange rate change)</b></p> <ul style="list-style-type: none"> <li>Central bank</li> <li>Other depository corporations</li> <li>Other financial corporations</li> <li>Central government</li> <li>State and local government</li> <li>Public nonfinancial corporations</li> <li>Other nonfinancial corporations</li> <li>Other resident sectors</li> <li>Nonresidents</li> </ul> <p><b>Other (price and/or exchange rate change)</b></p> <ul style="list-style-type: none"> <li>Resident sectors</li> <li>Nonresidents</li> </ul> <p><b>Nonfinancial assets (gains or losses; price change)</b></p> <p><b>Liabilities: Gains (revenue) or losses (expense)</b></p> <p><b>Deposits included in broad money (exchange rate change)</b></p> <p><b>Transferable deposits—In foreign currency</b></p> <ul style="list-style-type: none"> <li>Other financial corporations</li> <li>State and local government</li> <li>Public nonfinancial corporations</li> <li>Other nonfinancial corporations</li> <li>Other resident sectors</li> </ul> <p><b>Other deposits—In foreign currency</b></p> <ul style="list-style-type: none"> <li>Other financial corporations</li> <li>State and local government</li> <li>Public nonfinancial corporations</li> <li>Other nonfinancial corporations</li> <li>Other resident sectors</li> </ul> <p><b>Deposits excluded from broad money (exchange rate change)</b></p> <p><b>Transferable deposits—In foreign currency</b></p> <ul style="list-style-type: none"> <li>Central bank</li> <li>Other depository corporations</li> <li>Other financial corporations</li> <li>Central government</li> <li>State and local government</li> <li>Public nonfinancial corporations</li> <li>Other nonfinancial corporations</li> <li>Other resident sectors</li> <li>Nonresidents</li> </ul> <p><b>Other deposits—In foreign currency</b></p> <ul style="list-style-type: none"> <li>Central bank</li> <li>Other depository corporations</li> <li>Other financial corporations</li> <li>Central government</li> <li>State and local government</li> <li>Public nonfinancial corporations</li> <li>Other nonfinancial corporations</li> <li>Other resident sectors</li> <li>Nonresidents</li> </ul>
---	--

Table 2.4 (concluded)

<p><b>Securities other than shares, included in broad money</b></p> <p><b>In domestic currency (price change)</b>            Other financial corporations            State and local government            Public nonfinancial corporations            Other nonfinancial corporations            Other resident sectors</p> <p><b>In foreign currency (price and/or exchange rate change)</b>            Other financial corporations            State and local government            Public nonfinancial corporations            Other nonfinancial corporations            Other resident sectors</p> <p><b>Securities other than shares, excluded from broad money</b></p> <p><b>In domestic currency (price change)</b>            Central bank            Other depository corporations            Other financial corporations            Central government            State and local government            Public nonfinancial corporations            Other nonfinancial corporations            Other resident sectors            Nonresidents</p> <p><b>In foreign currency (price and/or exchange rate change)</b>            Central bank            Other depository corporations            Other financial corporations            Central government            State and local government            Public nonfinancial corporations            Other nonfinancial corporations            Other resident sectors            Nonresidents</p> <p><b>Loans—In foreign currency (exchange rate change)</b>            Central bank            Other depository corporations            Other financial corporations</p>	<p>Central government            State and local government            Public nonfinancial corporations            Other nonfinancial corporations            Other resident sectors            Nonresidents</p> <p><b>Financial derivatives (price and/or exchange rate change)</b>            Central bank            Other depository corporations            Other financial corporations            Central government            State and local government            Public nonfinancial corporations            Other nonfinancial corporations            Other resident sectors            Nonresidents</p> <p><b>Other accounts payable</b></p> <p><b>Trade credit and advances—In foreign currency (exchange rate changes)</b>            Central bank            Other depository corporations            Other financial corporations            Central government            State and local government            Public nonfinancial corporations            Other nonfinancial corporations            Other resident sectors            Nonresidents</p> <p><b>Other—In foreign currency (price and/or exchange rate change)</b>            Resident sectors            Nonresidents</p> <p><b>Shares and other equity (share price changes)<sup>1</sup></b></p>
---	---

<sup>1</sup>The data on gains/losses for shares and other equity are needed for memorandum items that accompany the sectoral balance sheet in the monetary statistics, as well as for flow data for the financial statistics. The data need to be disaggregated by economic sector of equity holder. Data for estimating the sectoral holdings of a corporation's shares and the corresponding valuation changes for the accounting period may need to be obtained from sources outside the accounting system of the financial corporation.

apply to the *valuation adjustment* accounts, given a greater propensity for gains and losses to be recorded directly to equity.

**2.125** National financial reporting standards may stipulate that gains and losses are to be presented on a net basis, or that gains and losses are to be shown separately. Gains or losses on a net basis are sufficient for the monetary and financial statistics, sub-

ject only to the requirement that, where appropriate, the net gains and losses have been disaggregated by financial asset, national/foreign currency of denomination, and economic sector.

**2.126** Many categories of valuation change data shown in Table 2.4 would not be applicable to ODCs that are small or specialized and, therefore, do not have all asset and liability categories in their balance

Table 2.5. Other Financial Intermediary: Accounts for Gains and Losses (Valuation Changes)

<b>Assets: Gains (revenue) or losses (expense)</b>	Other resident sectors
<b>Foreign currency (exchange rate change)</b>	Nonresidents
<b>Deposits (exchange rate change)</b>	<b>Other accounts receivable</b>
<b>Transferable deposits—In foreign currency</b>	<b>Trade credit and advances denominated in foreign</b>
Central bank	<b>currency (exchange rate change)</b>
Other depository corporations	Central bank
Other financial corporations	Other depository corporations
Nonresidents	Other financial corporations
<b>Other deposits—In foreign currency</b>	Central government
Central bank	State and local government
Other depository corporations	Public nonfinancial corporations
Other financial corporations	Other nonfinancial corporations
Nonresidents	Other resident sectors
<b>Securities other than shares (price and/or exchange</b>	Nonresidents
<b>rate change)</b>	<b>Other (price and/or exchange rate change)</b>
Central bank	Resident sectors
Other depository corporations	Nonresidents
Other financial corporations	<b>Nonfinancial assets (gains or losses price change)</b>
Central government	
State and local government	
Public nonfinancial corporations	
Other nonfinancial corporations	
Other resident sectors	
Nonresidents	
<b>Loans denominated in foreign currency (exchange</b>	<b>Liabilities: Gains (revenue) or losses (expense)</b>
<b>rate change)</b>	<b>Deposits included in broad money (exchange rate</b>
Central bank	<b>change)</b>
Other depository corporations	<b>Transferable deposits—In foreign currency</b>
Other financial corporations	Other financial corporations
Central government	State and local government
State and local government	Public nonfinancial corporations
Public nonfinancial corporations	Other nonfinancial corporations
Other nonfinancial corporations	Other resident sectors
Other resident sectors	<b>Other deposits—In foreign currency</b>
Nonresidents	Other financial corporations
<b>Shares and other equity (price and/or exchange rate</b>	State and local government
<b>change)</b>	Public nonfinancial corporations
Central bank	Other nonfinancial corporations
Other depository corporations	Other resident sectors
Other financial corporations	<b>Deposits excluded from broad money</b>
Public nonfinancial corporations	<b>(exchange rate change)</b>
Other nonfinancial corporations	<b>Transferable deposits—In foreign currency</b>
Other resident sectors	Central bank
Nonresidents	Other depository corporations
<b>Insurance technical reserves—prepayment of premi-</b>	Other financial corporations
<b>ums denominated in foreign currency (exchange</b>	Central government
<b>rate change)</b>	State and local government
<b>Financial derivatives (price and/or exchange rate</b>	Public nonfinancial corporations
<b>change)</b>	Other nonfinancial corporations
Central bank	Other resident sectors
Other depository corporations	Nonresidents
Other financial corporations	<b>Other deposits—In foreign currency</b>
Central government	Central bank
State and local government	Other depository corporations
Public nonfinancial corporations	Other financial corporations
Other nonfinancial corporations	Central government
	State and local government
	Public nonfinancial corporations
	Other nonfinancial corporations
	Other resident sectors
	Nonresidents

Table 2.5 (concluded)

<p><b>Securities other than shares, included in broad money</b></p> <p><b>In domestic currency (price change)</b>            Other financial corporations            State and local government            Public nonfinancial corporations            Other nonfinancial corporations            Other resident sectors</p> <p><b>In foreign currency (price and/or exchange rate change)</b>            Other financial corporations            State and local government            Public nonfinancial corporations            Other nonfinancial corporations            Other resident sectors</p> <p><b>Securities other than shares, excluded from broad money</b></p> <p><b>In domestic currency (price change)</b>            Central bank            Other depository corporations            Other financial corporations            Central government            State and local government            Public nonfinancial corporations            Other nonfinancial corporations            Other resident sectors            Nonresidents</p> <p><b>In foreign currency (price and/or exchange rate change)</b>            Central bank            Other depository corporations            Other financial corporations            Central government            State and local government            Public nonfinancial corporations            Other nonfinancial corporations            Other resident sectors            Nonresidents</p> <p><b>Loans—In foreign currency (exchange rate change)</b>            Central bank            Other depository corporations            Other financial corporations            Central government            State and local government</p>	<p>Public nonfinancial corporations            Other nonfinancial corporations            Other resident sectors            Nonresidents</p> <p><b>Financial derivatives (price and/or exchange rate change)</b>            Central bank            Other depository corporations            Other financial corporations            Central government            State and local government            Public nonfinancial corporations            Other nonfinancial corporations            Other resident sectors            Nonresidents</p> <p><b>Other accounts payable</b></p> <p><b>Trade credit and advances—In foreign currency (exchange rate changes)</b>            Central bank            Other depository corporations            Other financial corporations            Central government            State and local government            Public nonfinancial corporations            Other nonfinancial corporations            Other resident sectors            Nonresidents</p> <p><b>Other—In foreign currency (price and/or exchange rate change)</b>            Resident sectors            Nonresidents</p> <p><b>Shares and other equity (share price changes)<sup>1</sup></b></p>
---	---

<sup>1</sup>The data on gains/losses for shares and other equity are needed for memorandum items that accompany the sectoral balance sheet in the monetary statistics, as well as for flow data for the financial statistics. The data need to be disaggregated by economic sector of equity holder. Data for estimating the sectoral holdings of a corporation's shares and the corresponding valuation changes for the accounting period may need to be obtained from sources outside the accounting system of the financial corporation.

sheets and, for a given asset or liability category, do not have financial positions with some economic sectors.

**2.127** An OFC usually would have fewer applicable gain/loss accounts than an ODC, given that OFCs generally have fewer categories of assets and liabilities and, for a given category, have positions with fewer economic sectors.

**2.128** Table 2.6 illustrates the valuation-change data for a life insurance corporation or a pension fund that holds national currency, transferable deposits in national currency, securities other than shares (issued in national currency by central government, state and local government, and OFCs, and in foreign currency by nonresidents), and shares and other equity (issued in national currency by other nonfinancial corporations, and in foreign currency by nonresidents), and

Table 2.6. Life Insurance Corporation or Pension Fund: Accounts for Gains or Losses

<p><b>Assets: Holding gains (revenue) or losses (expense)</b></p> <p><b>Securities other than shares (price and/or exchange rate change)</b></p> <ul style="list-style-type: none"> <li>Central government</li> <li>State and local government</li> <li>Other nonfinancial corporations</li> <li>Nonresidents</li> </ul> <p><b>Shares and other equity (price and/or exchange rate change)</b></p> <ul style="list-style-type: none"> <li>Other nonfinancial corporations</li> <li>Nonresidents</li> </ul> <p><b>Financial derivatives (price and/or exchange rate change)</b></p> <ul style="list-style-type: none"> <li>Central bank</li> <li>Other depository corporations</li> <li>Other financial corporations</li> <li>Central government</li> <li>State and local government</li> <li>Public nonfinancial corporations</li> <li>Other nonfinancial corporations</li> <li>Other resident sectors</li> <li>Nonresidents</li> </ul> <p><b>Nonfinancial assets (price change)</b></p>	<ul style="list-style-type: none"> <li>Other financial corporations</li> <li>Central government</li> <li>State and local government</li> <li>Public nonfinancial corporations</li> <li>Other nonfinancial corporations</li> <li>Other resident sectors</li> <li>Nonresidents</li> </ul> <p><b>Insurance technical reserves (from revaluation of net equity and reserves)</b></p> <ul style="list-style-type: none"> <li>Net equity of households in life insurance reserves (life insurance corporation only)</li> <li>Net equity of households in pension funds (pension fund only)</li> <li>Prepayment of premiums and reserves against outstanding claims (life insurance corporation only)</li> </ul> <p><b>Financial derivatives (price or exchange rate changes)</b></p> <ul style="list-style-type: none"> <li>Central bank</li> <li>Other depository corporations</li> <li>Other financial corporations</li> <li>Central government</li> <li>State and local government</li> <li>Public nonfinancial corporations</li> <li>Other nonfinancial corporations</li> <li>Other resident sectors</li> <li>Nonresidents</li> </ul>
<p><b>Liabilities: Gains (revenue) or losses (expense)</b></p> <p><b>Securities other than shares</b></p> <p><b>In national currency (price change)</b></p> <ul style="list-style-type: none"> <li>Central bank</li> <li>Other depository corporations</li> <li>Other financial corporations</li> <li>Central government</li> <li>State and local government</li> <li>Public nonfinancial corporations</li> <li>Other nonfinancial corporations</li> <li>Other resident sectors</li> <li>Nonresidents</li> </ul> <p><b>In foreign currency (price and/or exchange rate change)</b></p> <ul style="list-style-type: none"> <li>Central bank</li> <li>Other depository corporations</li> </ul>	<p><b>Other accounts receivable: Trade credit and advances—In foreign currency (exchange rate changes)</b></p> <ul style="list-style-type: none"> <li>Other financial corporations</li> <li>Nonresidents</li> </ul> <p><b>Shares and other equity (life insurance corporation only; price changes)<sup>1</sup></b></p>

<sup>1</sup>The data on gains/losses for shares and other equity are needed for memorandum items that accompany the sectoral balance sheet in the monetary statistics, as well as for flow data for the financial statistics. The data need to be disaggregated by economic sector of equity holder. Data for estimating the sectoral holdings of a corporation's shares and the corresponding valuation changes for the accounting period may need to be obtained from sources outside the accounting system of the financial corporation.

financial derivatives (denominated in domestic and foreign currency). In the example in Table 2.6, the liabilities of the insurance corporation or pension fund include securities, financial derivatives, and trade credit from nonfinancial corporations and nonresi-

dents, as well as insurance technical reserves—net equity of households in life insurance corporations and in pension funds, respectively—and prepayment of premiums and reserves against outstanding claims (life insurance corporation only).

## 3. Institutional Units and Sectors

### Introduction

**3.1** The definition of institutional units and their grouping into sectors are covered in the *MFSM*, Chapter III. The concepts used in this *Guide* follow closely the *1993 SNA*, the *MFSM*, and the *Government Finance Statistics Manual 2001 (GFSM 2001)*. In addition, this *Guide* expands on issues that are relevant for compilers of monetary statistics and considers special cases whose classification is not straightforward.

**3.2** This *Guide* deals with institutional units in their role as holders of financial assets, and focuses consequently on the classification and sectorization of their accounts in the financial system. The residency of institutional units will determine the foreign/domestic breakdown of assets and liabilities of the financial corporations (FCs). Similarly, the grouping of resident institutional units into economic sectors and subsectors will show the financial corporations' claims on and liabilities to the different sectors of the domestic economy.

### Institutional Units

*An institutional unit is an economic entity capable, in its own rights, of owning assets, incurring liabilities, and engaging in economic activities and in transactions with other entities. (MFSM, ¶62)*

**3.3** Institutional units, as holders of financial assets and liabilities, constitute the structural building blocks for monetary and financial statistics. They hold financial assets in the form of cash, deposit accounts, securities, investments in mutual funds, life insurance policies, etc. They have liabilities in the form of loans from banks or other financial institutions, extensions of trade credits, their issuances of securities, and other financial obligations.

**3.4** The *1993 SNA* lists four main attributes of institutional units: (1) they are entitled to own goods or assets in their own rights; (2) they are able to take economic decisions and engage in economic activities; (3) they are able to incur liabilities on their own behalf; and (4) they have complete sets of accounts, or it would be possible to compile such accounts. Two main types of units may qualify as institutional units: persons or group of persons in the form of households, and legal or social entities whose existence is recognized by law.

### Households

**3.5** A household may consist of an individual or more than one person. Persons constituting a single household own assets in common, assume liabilities on behalf of the whole household, and make collective decisions on expenditure. Therefore, it is meaningful to treat all the persons constituting a household as a single institutional unit. Special cases of individuals who live together and are considered a single household are described in the section on sectorization.

**3.6** Economic activities undertaken by households—such as production and selling of goods and services—are treated as an integral part of the households themselves, unless legal entities are created separate from the households.

### Legal or Social Entities

**3.7** The other type of institutional units is legal or social entities that engage in economic activities and transactions in their own rights. Such units are responsible and accountable for the economic decisions or actions they take. The *1993 SNA* identifies four main categories of legal or social entities constituting institutional units: (1) corporations, (2) quasi-corporations, (3) government units, and (4) nonprofit institutions (NPIs).

## Corporations

**3.8** A corporation is a legal entity created for the purpose of producing goods or services for the market that may be a source of profit or other financial gains to its owner(s). It is collectively owned by shareholders who have authority to appoint directors responsible for its general management. The most relevant features of corporations may be summarized as follows: (1) their existence is recognized independently of other institutional units; (2) they are created for the purpose of producing goods and services for sale on the market at economically significant prices; (3) their ownership is vested in the shareholders collectively; (4) they are legally responsible and accountable for their actions; and (5) their control is ultimately exercised by the shareholders collectively. Other legal entities that have specialized functions and produce for the market—such as producers’ cooperatives, limited liability partnerships, or professional associations—are classified as corporations, too.

**3.9** It is common for corporations to own shares in other corporations, establishing relationships between them. Although control of a corporation sometimes can be achieved with less than half of the total shares, a minimum participation of 50 percent has been established as a practical guideline to determine control. Some of the common forms of relationships between corporations are listed below.

- *Conglomerates* or groups of corporations exist when a parent corporation controls several subsidiaries, some of which may control subsidiaries on their own.
- Conglomerates owning subsidiaries or branches in other countries are called *multinational corporations*.
- *Holding corporations* are corporations that control and direct groups of subsidiaries without having any significant production of their own. Very often, holding corporations are established for tax purposes, outside the countries in which the subsidiaries are located.
- A corporation is a *subsidiary* of another corporation when the latter controls more than half of the former’s voting power or has the right to appoint or remove a majority of its directors.
- A corporation is an *associate* of another corporation when the latter controls between 10 and 50 percent of the voting power of the former and thereby can exercise some influence over the policy and management of the former.

- An *ancillary corporation* is a subsidiary wholly owned by a parent corporation and whose activities are confined to providing services to the parent corporation. Ancillaries are treated as integral parts of the parent corporations.<sup>1</sup>
- *Trusts* are arrangements that provide for legal control of portfolios of assets and liabilities and specify the use of the portfolio holdings and the income generated thereby.
- *Special purpose entities* (SPEs) are created to carry out a single, well-defined, and specific activity.

## Quasi-corporations

**3.10** Quasi-corporations are unincorporated enterprises that function as if they were corporations and keep complete sets of accounts. For purposes of sectoring and subsectoring, they are treated as institutional units separate from the units to which they legally belong.

Quasi-corporations include the following:

- Unincorporated government enterprises engaged in market production and operating **in a similar way to publicly owned** corporations.
- Unincorporated units operated by households, engaged in market production, and operating **as if they were privately owned** corporations.
- Resident unincorporated operations owned entirely or partly by nonresident units (including joint ventures, branches, offices, agencies, and ancillaries) that engage in significant activity within the country over long or indefinite periods. (*MFSM*, ¶173, **corrected**)

## Government units

**3.11** Government units are legal entities established by political processes that have legislative, judicial, or executive authority over other institutional units within specific areas. Their principal functions are to provide goods and services to the community as a whole on a nonmarket basis, and to redistribute income and wealth by means of transfer payments. Because government units do not charge economically significant prices,<sup>2</sup> they finance their activities through taxes or other compulsory transfers from units in other sectors.

<sup>1</sup>Except for ancillary units established in a foreign territory, as described in the *Residency* section of this chapter.

<sup>2</sup>On economically significant prices, see the *Public nonfinancial corporations* section in this chapter.

**3.12** Government units may own unincorporated enterprises engaged in the production of market goods and services. If these enterprises are managed in a way similar to a corporation, with their own set of accounts, they are treated as quasi-corporations. If they do not meet these requirements, they remain part of the parent government unit.

### Nonprofit institutions

**3.13** NPIs are legal or social entities created for the purpose of producing goods and services, but whose status does not permit them to be a source of income, profit, or other financial gain for the units that establish, control, or finance them.

**3.14** Although they are not a source of profit to other institutional units, NPIs can be market producers if they provide services for which they charge economically significant prices or fees. NPIs engaged in market production sell their output at prices that are economically significant, but any surpluses generated by their activities must be retained within the NPI. Market NPIs include all NPIs serving enterprises, except those controlled and mainly financed by government units (which belong to the government sector). NPIs created by business associations to promote their interests (*market NPIs serving business*) are classified as market producers, and their members' contributions are treated as payments for services.

**3.15** Nonmarket NPIs provide most of their output free of charge or at prices that are not economically significant. *NPIs controlled and mainly financed by government* are classified within the general government sector.<sup>3</sup> *Control by government* means that the government has the ability to determine the general policy of the unit.

### Residency

**3.16** The concept and coverage of residency for the monetary statistics are identical to those in the *1993 SNA* and in the *Balance of Payments Manual*, 5th edition (*BPM5*). The separation between resident and nonresident units is a fundamental dichotomy that facilitates the estimation of the external position

<sup>3</sup>These include NPIs serving business if they are controlled and mainly financed by government.

of the financial sector. The key concept for defining the residency of an economic unit is its *center of economic interest*.

*An institutional unit is said to have a center of economic interest within a country when there exists some location—dwelling, place of production, or other premises—within the economic territory of the country on, or from, which it engages, and intends to continue to engage, in a significant amount of economic activity. (MFSM, ¶54)*

**3.17** Two aspects need to be highlighted: the economic unit must maintain at least one production establishment in the country, and it should plan to operate that establishment for at least one year.

**3.18** Compilers of monetary statistics must be aware that residency is not based on nationality of the account holder, or on the currency of denomination of accounts. A common mistake when reporting monetary statistics is to classify foreign-currency-denominated accounts as those of nonresidents, irrespective of the center of economic interest of the account holders.<sup>4</sup>

### Resident Units

**3.19** An institutional unit is a resident of a country where it has a center of economic interest. In most cases, it is considered a resident if it has already engaged in economic activities and transactions on a significant scale in the country for one year or more, or if it intends to do so. Ownership of land and structures within the country is not a sufficient condition to define a center of economic interest, because the owner can be a resident of another country, having a center of economic interest in the latter.

**3.20** Corporations or quasi-corporations are residents of a country if they intend to engage in a significant amount of production of goods or services or own land and structures there. They must maintain at least one production establishment in the country and plan to operate it indefinitely or over a long period of time. Additional criteria are the maintenance of a set of accounts covering local productive activities,

<sup>4</sup>The error often is due to historical circumstances, when only nonresidents could open accounts in foreign currency. As the financial systems liberalized, residents were also given opportunities to open such accounts, but the financial institutions continued to report all foreign-currency-denominated accounts as nonresident.



proof of income taxes paid to the local government, or the existence of a substantial physical presence.

**3.21** A household is a resident in the country in which its members maintain regular residence. All individuals who belong to the same household must be classified as residents in the same country.

**3.22** Apart from this general definition, there are special cases where individuals or productive units should be considered residents of the country, and their accounts incorporated into the domestic assets and liabilities of the FCs.

#### ***Cross-border workers***

**3.23** Individuals who cross international borders to work (some or all of the time) remain residents of their home countries. These include seasonal workers who work part of the year in another country and then return to their households, and border workers who regularly cross the frontier (daily or weekly) to work in a neighboring country.

**3.24** However, if these workers engage in substantial and sustained economic activity abroad, earn income, consume, maintain regular residence abroad, and return only briefly or infrequently to their original household, they cease to be considered a member of that household, and therefore are no longer considered a resident in the country in which the household is resident. In this case, these individuals clearly have a center of economic interest where they work and consume.

#### ***Staff of international organizations and technical assistance personnel***

**3.25** Although international organizations are, by definition, residents of the rest of the world (that is, nonresidents of the country where their enclaves are located), employees of these organizations are residents of the local economies where they have lived continuously for more than one year.

**3.26** Technical assistance personnel on long-term (more than one year) assignment should be treated as residents of the countries where they work. Employees of international organizations on long-term assignment in a country different from the location of the headquarters of the organization are residents of the country where they perform their duties. If the

assignment is shorter than one year, they are considered residents of the economy in which they reside on a longer-term basis.

#### ***Locally recruited staff of diplomatic representations***

**3.27** Locally recruited staff of embassies and other diplomatic representations continue to have their center of economic interest in the country where they live and in which the embassy (or representation) is located. Therefore, they should be considered residents of their home country.

#### ***Crew members of vessels or aircrafts***

**3.28** Crew members of vessels or aircrafts continue to be residents of the countries where they have their principal residence (even if they are outside the country for long periods of time) and not of the economies in which they stop or lay over but are not living.

#### ***Pension funds of international organizations***

**3.29** Pension funds of international organizations are treated as residents of the economy in which the organization is located, and are part of the other financial corporation (OFC) sector of that economy.

#### ***Subsidiaries or branches of multinational conglomerates***

**3.30** Subsidiaries or branches of a multinational corporation should be treated as units separate from the parent company, because they have their own balance sheets and retain legal responsibility for their corporate actions, and therefore are residents of the economy where they operate.

#### ***Offshore enterprises and offshore banks***

**3.31** Offshore units engaged in manufacturing processes (including assembly of components manufactured elsewhere) are residents of the economies in which the offshore enterprises are located. This treatment applies even if the units are located in special zones exempted from custom duties or regulations (free trade zones).

**3.32** Similarly, offshore banks are considered residents of the country where they have their offices, and should be part of the other depository corpora-

tion (ODC) sector of the host country, if they issue liabilities included in the national definition of broad money.

#### **Units operating mobile equipment**

**3.33** Mobile equipment can consist of ships, aircrafts, drilling rigs and platforms, railway rolling stock, etc. The same principles applied to determine the residence of an enterprise must be applied to an enterprise operating mobile equipment outside the economic territory where the enterprise is resident. If the operations take place in international waters or airspace, the unit has a center of economic interest where the operator maintains residence. If the operations take place in another economy, then the unit has a center of economic interest in this economy and is considered a resident there, if it has a separate set of accounts and pays taxes where it operates. Otherwise, production is attributed to the original operator, and the unit is a resident of the country where the operator resides.

#### **Construction companies**

**3.34** Construction companies operating in a foreign country (for instance, for the construction of major projects like roads or dams) must normally open a site office in the country where the project is undertaken. Although the site office may have no separate legal identity, it may nevertheless be treated as a quasi-corporation and therefore as a resident of the country where the project is located. This is particularly applicable to large-scale projects with completion times of several years.

**3.35** If the construction project will be finished in less than a year, it can be assumed that the parent company does not have a center of economic interest there, and the construction site can be considered an enclave outside the country in which the company has its headquarters. Consequently, the accounts of the site office should be recorded as accounts of nonresidents.

#### **Ancillary corporations, holding corporations, and special purpose entities**

**3.36** Domestic ancillaries are treated as integral parts of the parent corporation, rather than as separate institutional units. However, ancillary corporations located in a country different from their parent

corporations are treated as separate units, and considered residents of the country where they are legally established.

**3.37** Holding corporations and SPEs are often constituted outside the country where their parent corporation resides, either for tax purposes or because of legal or accounting considerations. Even if these holding corporations and SPEs are bare trustees, not bearing any market or credit risk, they are treated as separate units and considered residents of the economic territory where they are established.

#### **Multiterritory enterprises or entities**

**3.38** Multiterritory enterprises are single enterprises that have substantial operations in two or more territories, but for which branches cannot be identified as attributable to a single economy. Particular cases of multiterritory enterprises are binational (or multinational) public entities established to construct and operate hydroelectric projects on river borders, and bridges or tunnels that cross borders. The *BPM5* (§82) indicates that the operations of these corporations may be allocated in proportion to the amounts of financial capital each country has contributed, or that the enterprises may be treated as residents of the country where their headquarters are located with the premises in other countries treated as branches of a foreign corporation, though the first approach is preferable.

#### **Nonprofit institutions**

**3.39** An NPI is a resident of the country under whose laws and regulations it was created, and in which its existence as a legal or social entity is officially recognized and recorded. When an NPI engages in charity or relief work on an international scale, it is necessary to specify the residence of any branches it may maintain in individual countries in dispensing relief. If an NPI maintains a branch or unit for one year or more in a particular country, that branch or unit should be considered a resident of that country.

#### **National offices of regional central banks**

**3.40** A regional central bank (RCB) is an international financial institution that acts as an in-common central bank for the member countries of a currency union. If the structure of the currency union is such that the RCB has headquarters in one country and

maintains national offices in each member country, these national offices (which act as the central banks for those countries) are treated as institutional units separate from the institutions' headquarters and are considered residents of the countries where they are located.

**3.41** If there are no national central banks (NCBs), the headquarters office of the RCB is not classified as a separate institutional unit, and the stock and flows for the assets and liabilities of the RCB are allocated to the individual member countries of the currency union on the basis of each member's claim on the RCB.

### **Nonresident Units**

**3.42** Institutional units that have their center of economic interest outside the country are nonresidents, and their accounts are recorded as part of foreign assets or foreign liabilities, irrespective of the nationality of the account holder and of the currency of denomination of the accounts. In the monetary statistics, the most common types of nonresident accounts are correspondent accounts held in overseas banks, loans due to banks located outside the country, and accounts of international financial institutions (IMF, World Bank, etc.).

**3.43** In addition to cases in which it is easy to identify the accounts of nonresidents, there are several cases in which it is not clear-cut that the account holder is a nonresident of the economy.

### **Migrant workers**

**3.44** Individuals who earn income, consume, and maintain regular residence abroad and who return only briefly or infrequently to their original households are no longer considered part of the household in their home country, but rather are residents of the country where they regularly work. Even if an individual continues to be employed and paid by an enterprise that is resident in his or her home country, that person should normally be treated as a resident of the host country if he or she works continuously for one year or more.

**3.45** Very often, these individuals maintain deposit accounts in their country of origin for savings purposes or to have access to funds when they visit their country. Because migrant workers are nonresi-

dents of their home countries, their accounts should be reported as nonresident accounts and therefore as foreign liabilities of the depository corporations (DC) sector. Similarly, any loan granted to a migrant worker in his or her country of origin should be reported as a loan to a nonresident. For ODCs, it is often difficult to identify accounts of migrant workers as nonresident accounts, because they are opened by providing national identification and a national address. In countries with a substantial proportion of their population who live and work abroad, special instructions should be issued to the banks with a view to identifying the accounts of migrant workers.

**3.46** If the account opened by a migrant worker is a joint account with a resident of the country, or if the account holder authorizes a resident of the country to withdraw funds from such an account, then the account should be considered as belonging to a resident and should be reported under domestic liabilities.

### **Students and medical patients**

**3.47** Regardless of how long they study abroad, students should be treated as residents of their country of origin, as long as they remain members of households in their home countries. Accounts that they open in the country where they study should be reported, therefore, as accounts of nonresidents.

**3.48** Medical patients staying abroad are also treated as residents of their country of origin, even if they stay longer than one year, as long as they remain members of households in their home countries.

### **Foreign diplomatic representations**

**3.49** Embassies and other diplomatic representations are enclaves of their governments in the host country and part of the economic territory of the represented government. Their accounts in the financial system of the host country are reported as accounts of nonresidents.

**3.50** Employees sent by a government to work in its diplomatic representations continue to have a center of economic interest in their home country, irrespective of the length of their assignment in the foreign country. They continue to be residents in their home country, even if they live in dwellings outside the enclaves, and their accounts in the financial system are classified as accounts of nonresidents.

### **Military personnel**

**3.51** Military personnel stationed abroad, in an enclave of their home country (a military base) or in peace-keeping missions, continue to have their center of economic interest in their home economy, irrespective of the length of their assignments. Therefore, they are considered nonresidents of the country where they are serving. This is typically the case for North Atlantic Treaty Organization (NATO) military forces or the United Nations missions in postwar countries.

### **International organizations and aid agencies**

**3.52** International organizations are not considered residents of any national economy and, in particular, are not resident in the country in which they are located or conduct their affairs. They are treated as extraterritorial (that is, nonresident) by that economy. All accounts that these organizations have in the financial system of that country are treated as nonresident accounts. Holdings of securities issued by international organizations should be reported as a separate category under securities issued by nonresidents.

### **Regional central banks**

**3.53** The national offices of RCBs are considered residents of the countries where they are located. However, if a currency union has national offices, the headquarters office of an RCB should be classified as a separate nonresident unit that holds its own assets and liabilities. When compiling monetary statistics for the entire currency union, the RCB is a resident institutional unit of the currency union. Securities issued by an RCB headquarters should be reported by their holders as securities issued by a nonresident, rather than being allocated to the member countries of the currency union.

## **Sectorization of Institutional Units**

*Sectorization of domestic institutional units is a key element in the compilation and presentation of monetary and financial statistics. (MFSM, ¶80)*

**3.54** Adequate sectorization of the economy is fundamental for a proper compilation and presentation of monetary statistics. Appropriate sectorization of

monetary and financial accounts allows identification of FCs' claims on each resident sector and is key to the construction of financial statistics. The *MFSM* and this *Guide* recommend that the *monetary and financial statistics be sectorized in accordance with the 1993 SNA*, which groups similar kinds of institutional units according to their economic objectives, functions, and behavior.

**3.55** In the *1993 SNA* and the *MFSM*, the resident institutional units of the economy are grouped into five mutually exclusive sectors: (1) the FC sector, (2) the nonfinancial corporations sector, (3) general government, (4) the household sector, and (5) the nonprofit institutions serving households (NPISH) sector.<sup>5</sup> These sectors are also grouped into subsectors, as shown in Box 3.1. A unit engaged in activities belonging to more than one sector and not having a separated set of accounts must be classified entirely in a single sector, based on the most prominent activity in which it engages.

### **Financial Corporations**

*The financial corporations sector consists of all resident corporations and quasi-corporations principally engaged in financial intermediation or in related auxiliary financial activities. (MFSM, ¶82)*

**3.56** Through financial intermediation, these units raise funds by incurring liabilities on their own account to channel funds to other institutional units by way of lending or other forms of acquisition of financial assets. The most common units engaging in financial intermediation are commercial banks, but they are not the only ones. Some characteristics of financial intermediation include: (1) incurrence of liabilities to raise funds for lending; (2) transformation of financial instruments with respect to maturity, interest rate, currency of denomination, etc.; and (3) acquisition of credit and financial risks.

**3.57** The distinction between intermediaries and non-intermediaries is sometimes a matter of degree, because all economic units are capable, in some way, of engaging in financial intermediation. Key factors in deciding if an institutional unit is part of the FC sector are incurrence of credit and financial

<sup>5</sup>In the compilation and presentation of the monetary statistics, the household and NPISH sectors are combined under the category of *Other resident sectors*.

### Box 3.1. Main Sectors and Subsectors of the Economy

- Financial corporations (FCs)
  - Depository corporations (DCs)
    - Central bank
    - Other depository corporations (ODCs)
      - Commercial banks
      - Merchant banks, savings and loan associations, credit unions, rural banks, discount houses, post office giro institutions, offshore banks, etc.
  - Other financial corporations (OFCs)
    - Other financial intermediaries
      - Finance companies, leasing companies, investment banks, mutual funds, underwriters and dealers in securities, pawnshops, special purpose entities, holding corporations, asset management companies, etc.
  - Insurance corporations and pension funds
    - Insurance corporations
    - Pension funds
  - Financial auxiliaries
    - Public exchanges, brokers, bureaux de change, financial derivative corporations, supervisory agencies, bank restructuring agencies, solicitor nominee companies, trusts, etc.
- Nonfinancial corporations
  - Public nonfinancial corporations
  - Other nonfinancial corporations
- General government
  - Central government
  - State government
  - Local government
  - Social security funds<sup>1</sup>
- Households
- Nonprofit institutions serving households (NPISHs)

<sup>1</sup>Alternatively, social security funds can be allocated to the other subsectors of general government on the basis of the level at which they are organized.

risks, existence of a separate set of accounts for the financial intermediation activities, and the relevance of the provision of financial services within the total production of goods and services of the unit.

**3.58** The following institutional units are not included in the FC sector:

- Corporations or quasi-corporations that mainly sell goods or nonfinancial services and provide credit directly to their customers—for example, manufacturers or retailers that extend consumer credit under their own credit plans.

- Individuals or households that make loans or buy and sell foreign currency, if they do not have separate and complete sets of accounts for their financial activities.

**3.59** Within the FC sector, the *MFSM* distinguishes between DCs (comprising the central bank and ODCs) and OFCs.

#### Depository corporations sector

##### Central banks

*The central bank is the national financial institution (or institutions) that exercises control over key aspects of the financial system and carries out such activities as issuing currency, regulating money supply and credit, managing international reserves, transacting with the IMF, and providing credit to other depository corporations. (MFSM, ¶86)*

**3.60** Central banks usually act as bankers to governments, holding central government deposits and providing credit in the form of overdrafts, advances, and purchases of government securities. In some countries, they also accept deposits from or provide credit to nonfinancial corporations (public or private) and/or households (generally, their own employees).

**3.61** Central bank liabilities in the form of currency issuance, liabilities to ODCs, and deposits accepted from other sectors (excluding the central government) constitute the monetary base, which supports the expansion of money and credit. A few territories (Hong Kong Special Administrative Region, Scotland, and Northern Ireland) have authorized private banks to issue currency, fully backed by reserves held at the monetary authorities. Such liabilities of the monetary authorities to the private banks are a component of the monetary base in these territories.

**3.62** Many central banks act as fiscal agents of their central governments or government affiliated units. Transactions and financial positions should be attributed to the central bank only when it is the principal creditor/debtor. When it acts only as an agent, the transactions or positions should be attributed to the unit that is the principal creditor/debtor. Key to determining the ultimate creditor/debtor is the acquisition of financial risks and the reaping of the benefits from the transactions.

**3.63** Many central banks also regulate and supervise ODCs. If these activities are carried on within the structure of the central bank, they are included in the central bank subsector. However, if they are independent of the central bank, they are classified as financial auxiliaries, which are outside the central bank subsector.

**3.64** In most countries, central banks are separately identifiable institutions subject to differing degrees of government control, while having some autonomy in the formulation and implementation of monetary policy. They have various names such as central bank, reserve bank, national bank, or state bank.

**3.65** Apart from their headquarters, central banks usually have branches in various regions of a country. When compiling the central bank balance sheet, the accounts of all branches must be consolidated with the accounts of the headquarters. Other types of institutional arrangements may also be included in the central bank subsector.

#### Currency boards

**3.66** Currency boards are independent monetary authorities that issue national currency fully backed by foreign reserve assets,<sup>6</sup> at a fixed exchange rate vis-à-vis some major international currency. A currency board requires that the exchange rate be fixed to a major currency, with automatic convertibility at the fixed exchange rate, and a long-term commitment to the system. Although not engaged in all central banking functions, currency boards are part of the central bank subsector.

**3.67** Countries and territories with long-standing currency boards are Brunei Darussalam, Djibouti, Hong Kong Special Administrative Region, and some members of the Eastern Caribbean Central Bank (ECCB). In the 1990s, renewed interest in the establishment of currency boards arose as a means of fighting inflation, and four Eastern European countries (Bosnia and Herzegovina, Bulgaria, Estonia, and Lithuania) introduced currency boards in their economies.

#### Government-affiliated agencies

**3.68** In some countries, government-affiliated units perform central bank activities such as the issuance

<sup>6</sup>In some cases (for example, Brunei Darussalam), the backing is somewhat less than 100 percent.

### Box 3.2. Currency Unions and Regional Central Banks

#### Centralized Model

*Banque Centrale des États de l'Afrique de l'Ouest (BCEAO)*

Benin, Burkina Faso, Côte d'Ivoire, Guinea-Bissau, Mali, Niger, Senegal, Togo

*Banque des États de l'Afrique Central (BEAC)*

Cameroon, Central African Republic, Chad, Republic of Congo, Equatorial Guinea, Gabon

*Eastern Caribbean Central Bank (ECCB)*

Anguilla, Antigua and Barbuda, Dominica, Grenada, Montserrat, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines

#### Decentralized Model

*European Central Bank (ECB)*

Austria, Belgium, Cyprus, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, Netherlands, Portugal, Slovenia, Spain

of coins and/or currency notes, the holding of international reserves, operation of exchange stabilization funds, or having financial relationships with the IMF. When the agencies undertaking such monetary authorities functions are institutional units separate from the central government, they should be included in the central bank subsector.

**3.69** However, if these units remain financially integrated with and under the direct control and supervision of the government, they cannot be treated as separate institutional units, and any monetary authority functions carried out by the government should be recorded in the general government sector.

#### Currency unions and regional central banks

**3.70** A common currency area consists of more than one economy and has an RCB with the authority to issue the legal tender of the area. To belong to this area, an economy must be a member of the RCB. Member countries of the currency union share a common currency and may have a single monetary and foreign exchange policy (if the currency union is also an economic union). At present, there are two kinds of currency unions (Box 3.2).

**3.71** In the *centralized model*, the currency union has an RCB owned by the governments of the member countries, and the central bank operations in each member country are carried out by branches or agencies of the RCB. This model is used by the

Banque Centrale des États de l’Afrique de l’Ouest (BCEAO), the Banque des États de l’Afrique Central (BEAC), and the ECCB. The *MFSM* and this *Guide* recommend that *the RCB not be treated as a separate institutional unit, but rather should allocate its transactions and positions to the individual member countries in proportion to each member’s claims on and liabilities to the RCB.*

**3.72** The *decentralized model* is the one adopted within the European Union through the creation of the European Central Bank (ECB). In the decentralized model, the currency union comprises an RCB and NCBs, which own the RCB and act as the central banks for the countries in which they are located. The monetary and foreign exchange policies are formulated and approved by the decision-making bodies of the RCB, whereas policy implementation (although coordinated by the RCB) is a responsibility of the NCBs. The *MFSM* and this *Guide* recommend that *the headquarters office of the RCB be classified as a separate nonresident unit, holding its own assets and liabilities, and that each NCB be classified as resident of the country in which it is located.* NCBs’ claims on the RCB headquarters should be recorded as claims on nonresidents.

**3.73** Using either the centralized or decentralized model, the currency union needs to compile monetary statistics for the union-wide area, consolidating the accounts of the RCB headquarters and the accounts of the national branches or the NCBs, respectively. Foreign assets and liabilities of the RCB will reflect its claims on and liabilities to nonresidents of the currency union. Furthermore, the *MFSM* recommends that the sectoral balance sheets and surveys for countries in a currency union have a two-way classification of claims on and liabilities to nonresidents: those between resident FCs and nonresidents in other union countries and those between resident FCs and nonresidents outside the currency union. Claims on and liabilities to the headquarters office of the RCB should also be separately identified.

**3.74** Data compilation for an individual country’s central bank subsector will differ according to the currency union model. In the *centralized model*, the financial assets and liabilities of the RCB are allocated among the member countries according to a predetermined formula. In the *decentralized model*, the country’s central bank balance sheet will be the NCB’s balance sheet, while its foreign assets and

liabilities will reflect claims on and liabilities to non-residents outside the currency-union area; its claims on and liabilities to ODCs will cover all ODCs operating in the currency union.

**3.75** When compiling the central bank balance sheet of a currency-union country, a crucial task is to allocate the liability for currency issuance among the countries’ central banks. The BCEAO and BEAC delegate the currency issuance to their member countries, and the banknotes are marked to show the country of issuance; hence, each country reports currency in circulation as the currency it has issued *less* currency in ODCs’ vaults. In the euro area, the amount of banknotes in circulation in each country is allocated every month in proportion to each NCB’s share of the ECB’s capital, after deducting an 8 percent allocation to the ECB’s balance sheet.

#### **Other depository corporations**

*The other depository corporations subsector consists of all resident financial corporations (except the central bank) and quasi-corporations that are mainly engaged in financial intermediation and that issue liabilities included in the national definition of broad money. (MFSM, ¶92)*

**3.76** According to the *1993 SNA*, financial intermediation is defined as a productive activity in which an institutional unit incurs liabilities on its own account for the purpose of acquiring financial assets by engaging in financial transactions on the market. The role of financial intermediaries is to channel funds from lenders to borrowers by intermediating between them.

**3.77** The most prevalent way in which financial intermediaries obtain funds is through acceptance of deposits from the public. They also issue bills, bonds, certificates of deposit, other securities, or other financial instruments. All financial intermediaries that issue liabilities included in the national definition of broad money are classified as ODCs.

#### **Commercial banks**

**3.78** *Commercial bank* is the most common designation of a financial corporation in the ODC sector. In the past in many countries, commercial banks and the central bank were the only financial institutions that issued liabilities included in the monetary aggregates. As a result of technological, legal, and financial innovations, ODCs with designations other than

commercial bank have become prevalent in most countries. Therefore, the data in the Other Depository Corporations Survey (ODCS) must include not only all commercial banks operating in the country, but also all other institutions that issue liabilities that are included in the national definition of broad money.

**3.79** The range of activities in which a commercial bank can participate varies widely among countries, depending on national banking regulations and practices and the sophistication of the financial system in each country.

#### Other deposit-taking institutions

**3.80** Many other types of financial intermediaries accept deposits and/or issue other types of liabilities that are close substitutes for deposits and therefore are included in the national definition of broad money. Other deposit-taking institutions have various names, depending on their principal activities and the national naming conventions.

**3.81** Among the corporations and quasi-corporations that may be included in the ODC sector are:

- Merchant banks;
- Savings and loan associations, building societies, and mortgage banks;
- Credit unions and credit cooperatives;
- Rural banks and agricultural banks;
- Discount houses;
- Money-market mutual funds;
- Traveler's check companies engaged mainly in financial activities; and
- Post office giro institutions.

This list is neither exhaustive nor prescriptive. Compilers of monetary statistics should investigate the characteristics of an FC's liabilities to determine whether the liabilities should be included in broad money, which determines whether the FC qualifies as an ODC.

**3.82** *Merchant banks* specialize in financial activities that facilitate trade and commerce, typically dealing in international financing, long-term lending, and underwriting of securities. They specialize in banking relationships with multinational and other large corporations and usually do not offer banking services to the general public.

**3.83** *Savings and loans associations, building societies, and mortgage banks* specialize in long-term

lending for purchases of real estate. Traditionally, building societies and savings and loans associations were organized as mutual associations—that is, individuals who provided funds or borrowed were association members who had voting rights and control of the institutions. Legal and regulatory changes have relaxed the rules governing these institutions in many countries. Building societies raise funds in commercial money markets, and some savings and loans associations are more akin to commercial banks than to financial cooperatives.

**3.84** *Credit unions* are NPIs owned and controlled by their members. To open an account or to receive a loan at a credit union, an individual must first become a member. Credit unions accept deposits (technically, these may be designated as shares) and make various types of loans. In some countries, they are as closely regulated as commercial banks. In other countries, they are not as regulated and have relatively lenient reporting requirements, making collection of their data more difficult.

**3.85** *Rural banks and agricultural banks* are small community banks that provide financial services in rural areas. Because of the economic characteristics of their clients, they tend to specialize in microfinancing of rural activities. Collecting data from rural banks can be problematic: (1) in some countries, rural banks are not supervised by the central bank and do not have a legal obligation to report their data; (2) inadequate communication infrastructure in remote areas of the country may hinder regular reporting; and (3) sufficient staff resources for timely and accurate compliance with reporting requirements may be lacking.

**3.86** *Discount houses* act on behalf of, or transact mainly with, DCs. They raise funds primarily to finance investments in money-market instruments (for example, government bills, bankers' acceptances, and certificates of deposit), and they purchase securities from individual banks for rediscounting with the central bank. If they issue liabilities included in the national definition of broad money, they are part of the ODC sector; otherwise they should be classified as other financial intermediaries within the OFC subsector.

**3.87** *Money-market mutual funds*, which raise money from the public to invest in short-term financial assets, sometimes offer the withdrawal of funds from shareholder accounts through checks payable



to third parties. These third-party transfers sometimes are limited with respect to minimum amount or number of checks that can be written in a specified period. Shares in money-market mutual funds accounts—with or without third-party payment features—are close substitutes for deposits and often are included in the national definition of broad money.

**3.88** *Traveler's checks companies* sell negotiable instruments that can be directly used in making third-party payments. Traveler's checks, which have characteristics of both currency and liquid deposits, are sometimes included in the national definition of broad money.<sup>7</sup> A corporation that issues traveler's checks should be included in the ODC sector if it is a financial corporation and if the traveler's checks are included in the national definition of broad money. If the issuer of the traveler's checks engages principally in nonfinancial services (for example, American Express), it is classified as an other nonfinancial corporation (even if the traveler's checks are included in broad money).

**3.89** Post offices of some countries accept transferable and savings deposits, either on their own account or on behalf of third parties (for example, the treasury or another financial corporation). Account holders in *post office giro institutions* may make third-party payments or may withdraw funds from their savings accounts at other post offices of the country or foreign countries participating in the system. If this financial activity of the post office is managed independent of postal and telecom operations and has a separate set of accounts, it should be included in the ODC sector. If the deposit taking and transfer services are not separated from the nonfinancial operations, the postal system in its entirety is classified as a nonfinancial corporation. Data on deposits accepted by the postal system should be collected for inclusion in broad money. If the post office accepts deposits on behalf of the national treasury, the deposits should be reported by the treasury in the category of "central government deposit liabilities."

#### Offshore banks and offshore financial centers

**3.90** *Offshore banks* are established in jurisdictions that provide financial and legal advantages such as low or no taxation, privacy, and avoidance of regu-

<sup>7</sup>They are included if it is expected that most of the checks will be used for domestic market transactions; they are excluded if most are expected to be used during foreign travel.

lations such as reserve requirements or foreign exchange restrictions that are imposed on onshore financial corporations. They engage in various types of financial transactions, including deposit taking and extension of loans denominated in currencies other than the currency of the country in which they are located. However, they may be restricted from accepting deposits from residents of the country in which they are located.

**3.91** According to the *MFSM*, offshore units engaged in trade and finance are residents of the economies in which they are located. This *Guide* recommends that *offshore banks be included in the ODC sector if they transact with residents of the economy in which they are located and issue liabilities included in broad money*. If they do not issue such liabilities, they should be classified as other financial intermediaries within the OFC subsector. Because of the special characteristics of offshore banks, their data should be separately identified within the subsector. Given that offshore banks are subject to less stringent regulations than onshore financial institutions, data collection from offshore units is sometimes difficult. If the central bank does not regulate the activities of offshore banks, it will need to negotiate the provision of data from the offshore units, or seek special authority to obtain reporting compliance.

**3.92** *Offshore financial centers* are jurisdictions in which the majority of the financial transactions are made by financial institutions located therein and are on behalf of clients who reside outside the offshore financial center. Some offshore financial centers are islands, whereas others are on the mainland. Offshore financial centers have adapted to increased competition resulting from liberalization of financial regulations in advanced economies, and account for a significant share of global financial flows. Offshore financial centers should compile data from all institutions classified as residing in their jurisdictions.

#### Banks in liquidation

**3.93** Because of financial difficulties, some DCs may operate under the control of receivers or regulators, whereas others may have been closed. The DCs continue to exist, until a formal bankruptcy or reorganization has taken place. Until such corporations are liquidated or reorganized, their deposits may be effectively frozen. It is often unclear whether depositors and other creditors will eventually be able to recover all or part of their deposits or other funding

and, if so, the length of time before the creditors will be reimbursed.

**3.94** The DCs in liquidation or reorganization continue to have claims on various sectors of the economy, which eventually may be transferred to a restructuring agency or may be acquired by other DCs. Reorganization, sale, or merger of such DCs may result in all or part of the funds eventually becoming available to depositors and possibly other creditors.

**3.95** To avoid distortion in the monetary statistics while the restructuring process is on-going, the *MFSM* and this *Guide* recommend that *banks in liquidation continue to be included in the ODC sector as long as they possess financial assets and liabilities*. Separate data on their accounts should be presented as memorandum items accompanying the ODC sectoral balance sheet.

#### **Other financial corporations**

**3.96** Collection of OFC data for monetary and financial statistics can be difficult. Financial institutions in the OFC subsector often are supervised and regulated by official agencies at the state or national level rather than by the central bank. Therefore, close collaboration between monetary statistics compilers and the agencies supervising the various types of OFCs is required.

#### **Other financial intermediaries**

*The subsector of other financial intermediaries covers a diverse group of units constituting all financial corporations other than depository corporations, insurance corporations, pension funds, and financial auxiliaries. (MFSM, ¶99)*

**3.97** Financial corporations in the other financial intermediaries subsector generally raise funds on financial markets, but generally not in the form of deposits, and use the funds to extend loans and acquire other financial assets. The intermediaries often specialize in lending to borrowers in particular sectors of the economy and for specialized financial arrangements. Some of the types of units classified as other financial intermediaries are described in the next paragraphs.

**3.98** *Finance companies* extend credit mainly to nonfinancial corporations and households, actively

competing with commercial banks. Generally, they are less regulated than units in the ODC subsector and often are subject to fewer reporting requirements. Depending on the country, finance companies offer such services as consumer loans, credit cards, small business loans, mortgage loans, economic development loans, and purchases of bankers' acceptances and trade receivables.

**3.99** *Captive finance companies* are corporate subsidiaries that act as financial agents for their parent corporations, raising funds for lending to their parent corporations or for purchase of parent corporations' accounts receivables. Captive finance companies are sometimes operated by ODCs for engaging in specialized activities or for regulatory reasons. If they are not treated as units separate from their parent corporations, they are subsumed within the balance sheets of the parent corporations. They are classified as other financial intermediaries in the OFC subsector if they can be treated as separate institutional units.

**3.100** *Financial leasing companies* engage in financing for the purchase of tangible assets. The leasing company is the legal owner of the financed goods (airplanes, automobiles, mainframe computers, etc.), but ownership is in effect conveyed to the lessee, who has the benefits, costs, and risks associated with ownership of the assets.

**3.101** *Investment banks* assist corporations in raising funds in equity and debt markets and provide strategic advisory services for mergers, acquisitions, and other types of financial transactions. In addition to assisting with the raising of funds for their corporate clients, investment banks sometimes invest their own funds directly in the securities offerings of their clients. Other channels of funding are through individual investors (private equity), hedge funds dedicated to direct investments in corporations (venture capital), and borrowers who obtain collateralized loans.

**3.102** *Mutual funds* (also called investment pools, investment trusts, unit trusts, or institutions for collective investment) are specially organized financial arrangements that consolidate investor funds for the purpose of acquiring financial assets. The liquidity of mutual funds can vary considerably, from highly liquid investments in short-term financial instruments to long-term investments in equity shares, mortgage loans, and real estate.

**3.103** *Underwriters and dealers* specialize in securities market activities, operating through public exchanges, over-the-counter markets, and privately negotiated deals. They assist firms in issuing securities through the underwriting and market placement of new securities issues, and may trade in new or outstanding securities on their own account. Only underwriters and dealers that act as financial intermediaries are classified in this category. Securities brokers and other units that arrange trades between securities buyers and sellers but do not purchase and hold securities on their own account are classified as financial auxiliaries.

**3.104** *Financial derivative intermediaries* consist of units that engage primarily in issuing and/or taking positions in financial derivatives recognized as financial assets.

**3.105** *Specialized financial intermediaries* are a diverse group of highly specialized intermediaries such as: (1) electronic currency corporations, which are primarily involved in issuing electronic currency or similar electronic payments mechanisms; (2) export/import finance firms, which offer a broad range of financial and documentary services associated with international trade; (3) factoring companies, which acquire accounts receivable from commercial enterprises, extend credit by rediscounting the receivables, and provide guarantees that cover late or defaulted payments; (4) hedge funds, which invest in financial derivatives, take long and short positions in securities, and may sell over-the-counter derivative contracts; (5) mezzanine companies, which provide short-term financing for corporate mergers and acquisitions; (6) venture capital and development capital firms, which pool funds for equity investments in new companies or existing companies that are developing new technologies; and (7) pawnshops, which extend loans to individuals who use personal property as collateral.

**3.106** *Special purpose entities (SPEs)*, also called special purpose vehicles, are created to hold securitized assets or other assets that have been removed from the balance sheets of corporations or government units. SPEs can be separate corporations, but they are often organized as trusts or are created solely to hold specific portfolios of financial assets and liabilities. Securitization of assets on a large scale has been an important financial innovation that has led to extensive use of the SPEs as a means of facilitat-

ing the creation and marketing of securities. When deciding to classify an SPE within the other financial intermediaries subsector rather than within the subsector to which the parent unit belongs, it is essential to establish that the SPE sells a new financial asset and bears risk, rather than simply acting as a trust that passively manages assets. If the SPE is the legal owner of a portfolio of assets, sells a new financial asset that represents an interest in the portfolio, and has a full set of accounts, the SPE is acting as a financial intermediary and is classified in the FC sector. When the SPEs belong to FCs, the SPEs' accounts may be reported separately or may be incorporated into the balance sheets of their parent corporations, depending on the national practice for data reporting. If the SPE does not effectively transform or intermediate the portfolio and does not bear market or credit risks, it is considered to be a trust that passively holds assets. Accounts that SPEs hold at financial institutions should be classified in the same sector as their parent units, if the SPEs are not classified as separate corporations. SPEs established overseas are always treated as separate units and are classified as other financial intermediaries in the countries where they are located.

**3.107** *Holding corporations* are corporations that control groups of subsidiary corporations and whose principal activity is to own and direct the groups. A holding corporation is classified in the OFC sector if the main activities of the entire group of corporations are financial activities. When sufficient information about the relative sizes of the corporations in the group is unavailable, a holding corporation may be classified as a financial corporation if a simple majority of the subsidiary corporations are financial corporations. Financial holding corporations may be allocated to subsectors according to the type of financial activity mainly carried out by the group they control. Therefore, a holding corporation controlling a group of insurance corporations is classified in the subsector of insurance corporations and pension funds. However, if no single type of financial activity is clearly predominant within the group, the holding corporation should be classified in the other financial intermediaries subsector.

**3.108** *Asset management companies (AMCs)* are created to address the workout of nonperforming loans (NPLs) or other impaired financial assets through the acquisition, management, and disposal of the impaired assets. Most AMCs have been established

by governments as public institutions, but AMCs have also been created as financial corporation subsidiaries to facilitate the management of their own NPL portfolios. AMCs can function as fast-disposal units for selling loans and/or other impaired financial assets, as medium-term corporate restructuring agencies, as warehouses for holding the NPLs for extended periods, or as hybrid units performing multiple functions. AMCs are funded directly by the government or through borrowing, mainly through the issuance of bonds with or without government guarantees. If not subsidiaries of ODCs, AMCs that are independent institutions are classified as OFCs, irrespective of the sources of their funding. If they are subsidiaries of ODCs, their balance sheets are consolidated with the balance sheets of their parent ODCs.

### ***Insurance corporations and pension funds***

*This subsector includes resident insurance corporations and quasi-corporations and autonomous pension funds. (MFSM, ¶97)*

**3.109** *Insurance corporations* provide financial benefits to policyholders and their survivors in the event of accidents, illness, death, disasters, or incurrence of various business or personal expenses. The subsector also includes reinsurance corporations, which provide insurance against losses sustained from insurance policies issued by other insurance corporations.

**3.110** *Life insurance corporations* invest premiums to build up portfolios of financial assets to be used to meet future claims. Non-life insurance companies provide financial benefits in the event of accidents, fire, property loss, health-related expenses, etc., spreading current risk or expenses among clients. Some individual insurance corporations sell both life and non-life insurance, in which case they are called composite insurance companies.

**3.111** Some corporations create captive insurance subsidiaries to handle their insurance needs. Captives are units separate from their parents and are classified in the OFC subsector. Captives collect premiums from their parent corporation, then reinsure themselves or invest their assets to build up reserves against future claims of the parent corporation. Some captives also provide insurance for unaffiliated units.

**3.112** *Reinsurance corporations* insure the insurance policies written by other insurance corporations in

exchange for insurance premiums. The reinsurance market is dominated by large corporations, but smaller reinsurers also exist. Insurance corporations purchase reinsurance to offset policy risk, thereby capping the net loss incurred if the insured event occurs.

**3.113** *Pension funds* are established to provide retirement benefits for specific groups of employees. Pension funds hold and invest assets of contributors to cover future pension payments. Governments sometimes organize pension plans for their employees, which are independent of the social security system. Pension plans can be established on a voluntary basis, or they can be compulsory with mandated contributions from the employee, employer, or both. Pension funds organized as trusts are not treated as separate institutional units.

**3.114** Depending on how the benefits are determined, pension plans are classified as *defined benefit plans* or *defined contribution plans*. Under a *defined benefit plan*, the future retirement benefits are determined by an actuarial formula related to participants' lengths of service and salaries, expected retirement ages, mortality rates, etc. Under a *defined contribution plan*, the benefits to be received by a participant are based on the participant's contributions to the pension fund and the investment performance of the fund.

**3.115** Pension plans may be *funded* or *unfunded*. *Funded* plans have separate pools of financial assets, or reserves, assigned for the payment of benefits. *Unfunded* plans are operated by employers who do not create specific pension-fund reserves for the payment of benefits.

**3.116** Three types of funded pension plans are: (1) those operated by insurance corporations, (2) those operated as autonomous pension funds, and (3) those operated as non-autonomous pension funds. All three types of pension funds hold reserves dedicated to the payment of pensions and other retirement benefits to the employees or other beneficiaries.

**3.117** The pension funds included in the OFC subsector are those that are independently constituted from the units that have created them and that have their own separate sets of pension-fund assets and liabilities, with specific obligations to their contributors.

**3.118** Excluded from the OFC subsector are non-autonomous pension funds managed by the

employer, state-sponsored pension systems funded through wage taxes (pay-as-you-go schemes), and arrangements organized by nongovernment employers and for which the reserves of the fund are simply included among the employer's own resources or are invested in securities issued by that employer. All assets, liabilities, transactions, and other events of non-autonomous pensions funds are combined with the accounts of the employer who operates the scheme and are classified in the same institutional sector as the employer.

### **Financial auxiliaries**

*The financial auxiliary subsector includes financial corporations that engage in activities closely related to financial intermediation but do not act as intermediaries. (MFSM, ¶101)*

**3.119** Activities that are auxiliary to financial intermediation are performed, on a secondary basis, by traditional financial intermediaries or by *financial auxiliaries* that do not engage in raising funds or extending credit on their own account. Some of the most common types of financial auxiliaries are described in the next paragraphs.

**3.120** *Public exchanges and securities markets* provide facilities in which commodities and securities (bonds, equities, financial derivatives, etc.) are transacted. An exchange is often responsible for ensuring the qualifications of its members, guaranteeing the completion of transactions, clearing and netting transactions, arranging payments, resolving disputes, and guarding against fraud. The sector includes the exchange itself and a number of entities such as securities depository companies, accounting and clearing offices, other specialized providers of securities trading services, and nongovernmental organizations that regulate or supervise exchanges and securities markets. Compilers are advised to classify markets as organized exchanges if they (1) are legally determined to be exchanges by regulators or courts; (2) hold accounts or deposits for clients in their own name or act as counterparties in trades; (3) maintain insurance or capital reserves; (4) exercise control over the trading of exchange members; (5) operate a margining system or collect collateral; and (6) have a specific location for trading.

**3.121** *Brokers and agents* are individuals or firms that arrange, execute, or otherwise facilitate client trans-

actions in financial assets. Included are brokers and agents who handle the purchase and sale of securities or other financial contracts for their clients, as well as providers of financial advisory services to brokers and their clients. Brokerage firms are distinguished from underwriters and dealers that are classified as other financial intermediaries. Only brokers and agents that clearly specialize in brokerage and related activities and do not take their own positions in financial assets should be included in this subsector.

**3.122** *Foreign exchange companies, or bureaux de change*, are units that buy and sell foreign exchange in retail or wholesale markets. In many countries, foreign exchange corporations are licensed and regulated, and high-quality data on their activities can be collected. In economies with foreign exchange controls, individuals or enterprises such as travel agencies engage in informal foreign exchange trade, complicating the measurement of overall activity. Most commercial banks have departments that trade in foreign exchange, and the activity is included into their balance sheets.

**3.123** *Financial guarantee corporations* insure customers against financial loss on specific securities or other contracts, or against losses from collapse of financial institutions. Guarantors must establish financial capability for fulfilling their obligations but, unlike insurance corporations, do not have definable pools of assets constituting insurance technical reserves. Their activities may be limited to specific types of financial transactions, and they are not regulated as insurance corporations. Very often, guarantees on financial instruments are provided by banks, securities brokers, and other financial intermediaries as secondary activities. Only specialized independent guarantee corporations should be classified within this subsector. It is not always easy to distinguish between financial guarantee corporations and insurance corporations. In borderline cases, the units should be classified as insurance corporations.

**3.124** *Insurance and pension auxiliaries* include agents, adjusters, and salvage administrators. Their unique nature and the large scale of their activities in some countries justify the separate identification of these units.

**3.125** *Financial derivative corporations* facilitate the issuance of financial derivative contracts, without actually issuing the financial derivatives or tak-

ing financial positions in them. Although these units may have financial assets, they are not classified as other financial intermediaries, because they do not intermediate by incurring liabilities in order to acquire financial assets. These financial derivative corporations are distinguished from financial derivative intermediaries that issue or take positions in financial derivatives, and which are classified as other financial intermediaries.

**3.126** *Representative offices of foreign banks* that do not accept deposits or extend credit are classified as resident financial auxiliaries, even though they promote and facilitate transactions of the nonresident parent company.

**3.127** *Corporations primarily involved in the operation of electronic payment mechanisms* are classified as financial auxiliaries if they can be separately identified as institutional units, are primarily engaged in this specialized activity, and do not incur liabilities against the electronic payment instruments. If they incur liabilities against the issuance of electronic currency, they are included in the other financial intermediaries subsector or in the other depository corporations subsector (if the electronic currency is included in the national definition of broad money).

**3.128** *Supervisory agencies and regulatory bodies* that regulate or supervise financial corporations are classified as financial auxiliaries if they are independent units, even if they are agencies affiliated with the government. The recommendation of the *MFSM* and this *Guide* differs from the recommendation of the *1993 SNA*, which classifies them as part of the central bank subsector if they are separate institutional units. The *MFSM* follows the treatment in the *European System of Accounts (ESA; Eurostat, 1996)*, which is based on recognition that these regulatory bodies are not financial intermediaries, and that the activities of some units (for example, securities commissioners or insurance regulators) have little relationship to central bank activities. When regulation of the activities of commercial banks and other financial corporations is exercised by the central bank through one of its departments, such regulatory activities can be subsumed within the central bank. Regulatory bodies may become involved in extending emergency credits, or acquiring assets and liabilities of financial institutions during bankruptcies or reorganizations. When holdings of financial assets and liabilities become substantial,

the unit should be reclassified as an other financial intermediary.

**3.129** *Bank restructuring agencies* are set up as independent entities to review the rehabilitation plans of suspended financial corporations, assist depositors and creditors of suspended financial corporations, administer the liquidation of nonviable financial corporations, or oversee the liquidation or reorganization process.

**3.130** *Solicitor nominee companies* are bare trusts that receive funds from private sources for lending that is secured by real property. The nominee company holds the security in its own name, but the holding is on behalf of the lenders, who are the beneficial owners of the security. Given that the nominee company is a bare trust, the lenders are not provided with a guarantee that the borrowers will repay the loans.

**3.131** *Trusts* are arrangements that provide for legal control of financial assets and liabilities. Compilers rarely have access to detailed information on all but the largest trusts, and accurate sectorization of many trusts may be difficult. In the absence of information about the owners of the underlying assets, trusts are not recognized as separate institutional units and are consolidated with the units that control them. Data on trusts administered by depository corporations should be reported together with the accounts of the parent corporations. Trusts established for some types of financial intermediation (for example, securitization, collateralized security issuance, investment pooling) may be recognized as separate units if (1) they act like financial intermediaries, (2) no other unit can reasonably be considered as controlling the portfolio, and (3) serious discrepancies would occur in the financial accounts if these trusts were ignored. Similarly, trusts organized in foreign countries are treated as a separate units having residency in the countries in which they are legally domiciled.

### Nonfinancial Corporations

*The nonfinancial corporations sector encompasses [resident] corporations and quasi-corporations engaging primarily in the production of market goods and nonfinancial services. (MFSM, ¶106)*

**3.132** The nonfinancial corporations sector is composed of the following set of resident institutional units: (1) all resident nonfinancial corporations, irre-

spective of the residence of their shareholders; (2) all resident nonfinancial quasi-corporations, including the branches or agencies of foreign-owned nonfinancial enterprises that are engaged in significant amount of production in the economic territory on a long-term basis; and (3) all resident NPIs that are market producers of goods or nonfinancial services.

**3.133** Some nonfinancial corporations have secondary financial activities—for example, producers or retailers of goods that provide consumer credit directly to their customers. Such corporations are classified as belonging entirely to the nonfinancial corporations sector, provided that their main activities are nonfinancial.

*The nonfinancial corporations sector is divided, on the basis of the types of institutional units exercising control, into two mutually exclusive subsectors. Public nonfinancial corporations ... [and] other nonfinancial corporations. (MFSM, ¶106)*

#### Public nonfinancial corporations

**3.134** Public nonfinancial corporations consist of resident nonfinancial corporations and quasi-corporations that are subject to control by government units. Control over a corporation is defined as the ability to determine general corporate policy by choosing appropriate directors, if necessary.

**3.135** The government may secure control over a corporation either by owning more than half of the voting shares or otherwise controlling more than half of the shareholders' voting power, or as a result of special legislation, decree, or regulation empowering the government to determine corporate policy or to appoint the directors. Control of more than half of the shareholders' voting power can be exercised directly via ownership of the shares, or indirectly through another public corporation that has a controlling power over a subsidiary.

**3.136** To be classified as a public nonfinancial corporation, rather than as a government agency, a corporation must produce goods or nonfinancial services for the market and charge economically significant prices, which are prices that influence the demand for the goods or services in question. The prices charged for the goods or services may be insufficient to generate a profit for the corporation or even to cover its production costs, but as long as they are high enough

to influence the demand, the institutional unit is classified as a public corporation. For instance, public railway and urban transportation systems may generate losses, but the fares for their service are high enough to produce sizable revenue for the corporation and to influence the public's decisions to use or not to use the system. However, some government services are provided for nominal fees that are so low that the fees do not ration the use of the facilities and do not produce enough revenue to contribute significantly to the financing of the operations.

**3.137** For a unit that sells its output to be classified as a public nonfinancial corporation, it must sell most of its output to the public. For instance, a government publishing office that sells its publications at prices that produce enough revenue to cover all or most of its operating costs should be classified as a public nonfinancial corporation. However, a national statistical office will be considered part of the central government, even if its publications are sold to the general public, because this is not its core activity and produces only a modest amount of revenue, which is classified as special revenue.

**3.138** A unit that is an internal service organization such as a transportation pool, a supply depot, or a munitions factory that sells its output to other government units is treated as an ancillary, and its activities are consolidated with the other activities of the government unit that controls it. A unit established by the government to borrow on the market and to lend only to general government units (even if on commercial terms) should be classified as part of the general government, even though it has all characteristics of an FC.<sup>8</sup>

**3.139** For a public corporation (or quasi-corporation) to exist, the government must allow considerable discretion with respect to the management of the production processes and the use of funds. The corporation must be able to maintain its own working capital and be able to finance some or all of its capital formation, either from its own resources or by borrowing. The ability to distinguish flows of income and capital between a corporation and the government unit that owns it implies that the operating and financing activities of the corporation are not fully integrated with the parent unit's corresponding

<sup>8</sup>However, if the unit lends to public corporations, it would be classified as an FC.

activities, despite the fact that the corporation is not a separate legal entity.

**3.140** It is sometimes difficult for monetary statistics compilers to distinguish between public and private nonfinancial corporations, or between units that are part of general government and units that are public nonfinancial corporations. The difficulties have intensified in the wake of public corporation privatization during the 1980s and 1990s. Without a specific frame of reference, compilers at central banks and ODCs have relied on their own knowledge—not always up to date—when classifying a unit in one or another sector. Mistakes are common, and partially privatized corporations (still under government control) have been classified as private corporations, fully privatized corporations have continued to be reported as public nonfinancial corporations, and government agencies have been misclassified as public nonfinancial corporations. The starting point in establishing the classification should be the development of an official and comprehensive list of institutional units belonging to the public nonfinancial corporations sector. This list should be distributed to the central bank, ODCs, and OFCs to ensure a uniform sectorization of these units. The list should be periodically reviewed and updated. Some countries have introduced an identification code (normally linked to the tax system) for each economic unit, which would lead to classification of each unit in its appropriate sector.

#### **Other nonfinancial corporations**

**3.141** Within the category of other nonfinancial corporations, national private nonfinancial corporations are distinguished from foreign-controlled nonfinancial corporations.

**3.142** *National private nonfinancial corporations* include all resident nonfinancial corporations that are not controlled by government or by nonresident institutional units. Effective control is difficult to determine for a corporation that has minority ownership shares, but a practical rule is to assign control to the group that owns more than 50 percent of the shares of the corporation.

**3.143** The key to classifying a unit as a private nonfinancial corporation is to establish that the unit produces for the market. Private nonfinancial corporations may generate losses during certain periods,

but those for which losses are systematic will eventually go bankrupt and disappear.

**3.144** Some private nonfinancial corporations may produce goods or services for the government (that is, public goods or public services) or goods or services for which production is highly subsidized by the government. Even if the goods or services are not being produced for the market, profit-oriented corporations that produce the goods or services should be classified as private nonfinancial corporations.

**3.145** This subsector also includes NPIs that produce goods or nonfinancial services for the market, such as units engaged in providing education or health services on a fee basis, or trade associations serving enterprises.

**3.146** *Foreign-controlled nonfinancial corporations* comprise all resident nonfinancial corporations that are controlled by nonresidents. The classification is based on majority control (more than 50 percent of the shares) and is therefore not identical to the balance of payments concept of direct investment enterprises, which includes associated firms (those with 10–50 percent ownership by nonresidents). This subsector includes: (1) subsidiaries (but not associates) of nonresident corporations; (2) corporations controlled by nonresident units that are not corporations, such as a corporation controlled by a foreign government, or by a group of nonresident units acting in concert; and (3) branches or other unincorporated entities that engage in significant amounts of production in the economic territory on a long-term basis and therefore are treated as resident quasi-corporations.

#### **Special cases**

##### ***Household unincorporated market enterprises***

**3.147** Household unincorporated market enterprises are created to produce goods or services for sale or barter on the market. They can engage in virtually any kind of productive activity, and can range from individuals working as street vendors with little capital and no premises of their own, to manufacturing, construction, or service enterprises with several employees. These enterprises also include unincorporated partnerships in which the partners belong to different households.



**3.148** If these unincorporated enterprises have their own sets of accounts, independent of the households, and their owners do not bear unlimited liability for the debts of the business, they are treated as quasi-corporations and are classified in the nonfinancial corporations sector. Otherwise, they are classified as part of the household sector.

#### *Special purpose entities*

**3.149** SPEs are classified within the other financial intermediaries subsector when they actively manage their portfolios of assets, place themselves at financial risk, and have full sets of accounts. Very often, however, SPEs are created simply for accounting purposes, acquiring some of the balance-sheet items of the parent corporation. These SPEs are created through legal arrangements that heavily restrict the decision-making capacity of their governing bodies (autopilot arrangements), and all the risks and profits of their operations reside with the parent corporations.

**3.150** The international financial reporting standards specify that the consolidated financial statements of the parent corporation should incorporate the accounts of all SPEs in which the corporation has a controlling financial interest. This approach takes into account the economic substance of the relationship between the parent corporation and the SPE, rather than merely the legal form, thereby treating the SPE as an ancillary of the parent corporation, rather than as an independent unit. Consistent with this approach, this *Guide* recommends that *such SPEs' accounts at FCs be reported as belonging to the economic sector of their parent corporations.*

**3.151** When SPEs are established outside the economic territory in which the parent corporation is located, they should be considered resident of the host economy, even if they have little or no physical presence. In these cases, they should be treated as separate institutional units, and their accounts in the financial sector of the host economy are reported as OFC accounts in the host economy.

#### **General Government**

*General government units exercise legislative, judicial, or executive authority over other institutional units within a specified area. (MFSM, ¶108)*

**3.152** Government units are unique legal entities established by political processes. Typically, govern-

ments provide, for collective consumption, free goods and services such as public administration, defense, and law enforcement. These public goods are not allocated on the basis of the exclusion principle. No residents are excluded from consumption of the goods, and each resident can benefit without diminishing other residents' access to the goods. Because of these characteristics, provision of the goods and services must be organized collectively and financed through taxation or other government revenue. Governments may also provide other goods or services, free or at prices that are not economically significant, even though the recipients could be charged for such goods and services. Finally, governments may provide transfers to institutional units (usually households) to redistribute income or wealth. Governments have authority to raise funds by collecting taxes or compulsory transfers from institutional units, and are also able to borrow on their own account.

**3.153** A government unit is not limited to a specific geographic location, given that ministries and government departments may be dispersed throughout a country, and branch offices and agencies may be maintained in various locations. Despite their separate locations, these government offices are part of a single institutional unit of government.

**3.154** There may be government entities with separate legal identity and substantial autonomy, including control over the volume and composition of their expenditures and funding through direct sources of revenue such as earmarked taxes. These entities are treated as separate government units if they maintain full sets of accounts, own assets in their own right, engage in nonmarket activities for which they are held accountable by law, and are able to incur liabilities and enter into contracts.

**3.155** The general government sector consists of all government units and all nonmarket NPIs controlled by and financed mainly by the government. Depending on the administrative and legal arrangements, more than one level of government usually exists within a country, but not all countries have all levels of government. The *1993 SNA* and the *GFSM 2001* provide two principal methods for delineating the subsectors of general government. The first method divides general government into: (1) central government, (2) state governments, (3) local governments, and (4) social security funds. The second method subsumes the social security funds within the gen-

eral government subsectors—central, state, or local government—in which the social security funds operate. The choice between the methods depends on the magnitude and organization of the social security funds, as well as on the extent to which their management is independent of the government units with which they are associated.

### **Central government**

**3.156** The political authority of central government extends over the entire territory of the country. The central government has the authority to impose taxes on all resident and nonresident units engaged in economic activities within the country. The central government is responsible for providing collective services for the benefit of the community as a whole, such as national defense, relations with other countries, public order and safety, and the efficient operation of the social and economic system of the country. In addition, it may incur expenses in providing services that primarily benefit individual households, such as education or health, and it may make transfers to institutional units, including other levels of government.

**3.157** The central government is a large and complex subsector in most countries. It is generally composed of a central group of departments or ministries, plus autonomous units under the authority of the central government. The departments (or ministries) are sometimes deliberately dispersed throughout the country, but they nevertheless remain part of the central government. Similarly, if the central government maintains branch offices or agencies in different parts of the country to meet local needs, including military bases or installations that serve national defense purposes, these must also be counted as part of the central government. For instance, the Ministry of Health may maintain a network of hospitals in different parts of the country. The accounts of the hospitals are classified as part of central government, rather than being treated as part of local government.

**3.158** In some countries, the central government may include units that engage in financial activities that are undertaken by central banks in other countries. Units of the central government may be responsible for the issuance of currency, holding of international reserves and operation of exchange stabilization funds, and/or a financial relationship with the IMF. When financially integrated into the

central government and under the direct control and supervision of the central government, these monetary authorities functions are recorded as part of the government sector, rather than in the financial sector. Analytical importance sometimes is attached to compiling a single set of accounts that cover all monetary authorities functions performed by the central bank and the central government. The presentation that covers the central bank's balance sheet and the monetary authorities activities of the central government is designated as the *Monetary authorities account*.

**3.159** Monetary and financial statistics compilers need to be provided with a comprehensive list of agencies and other entities that belong to the central government (as well as lists of entities within state and local government). Responsibility for providing this list should reside with a single government agency such as the ministry of finance or the general accounting office. The list should be periodically reviewed and updated.

### **Government branches**

**3.160** The largest set of central government bodies comprises those with executive, legislative, and judicial powers. The office of the presidency, all national ministries, secretaries, armed forces, parliament, and all offices of the national judicial system are included. If some of these institutions have branches dispersed throughout the country, their accounts should be classified as part of the corresponding institutional unit within the central government.

**3.161** Entities such as health or education ministries maintain establishments (hospitals, schools, universities, etc.) for the provision of general public services that are free of charge or require payment of fees that are not economically significant. The accounts of these entities should be reported together with the parent ministries' accounts within central government.

**3.162** If the units such as hospitals and schools charge economically significant prices for their services and receive revenue that contributes substantially toward the financing of their operations, are managed autonomously, and own assets and incur liabilities for their own account, they may be considered to be market NPIs, and their accounts are included in the public nonfinancial corporations subsector.

### *Nonmarket NPIs*

**3.163** Nonmarket NPIs controlled and mainly financed by the central government, although legally nongovernment units, should be classified as part of the central government sector. Governments may choose to use NPIs rather than government agencies to carry out some government policies. Government NPIs take the form of research and development institutes, standard-setting agencies, environmental protection entities, etc.

**3.164** Government control over a nonmarket NPI is determined by the ability to influence the NPI's general policies and programs, appoint its directors and/or managers, and determine the amount of central government financing. An NPI mainly financed by the central government through the national budget should be considered a central government agency, even if it charges fees for its services or has an extraordinary source of income through the sale of its products. For instance, it is common for standard-setting agencies to charge for the issuance of certificates of quality, or for research and development institutes to copyright and sell their discoveries. However, these proceeds are not their main sources of income, and they continue to rely on government transfers to finance their budgets.

### *Autonomous agencies*

**3.165** Within the central government sector are numerous units created for special purposes and which enjoy substantial administrative autonomy in terms of policy setting and budget management. Nevertheless, these should be classified as part of the central government, because they are mainly funded through the national budget.

**3.166** *Special agencies* may have separate legal identity and discretion over the volume and composition of their expenditures, and may have a direct source of revenue in the form of earmarked taxes. Such agencies are often established to carry out specific functions such as road construction or the nonmarket production of health or education services.

**3.167** *Agencies that manage internationally financed development projects* such as those financed by multilateral organizations (for example, the World Bank) or donor agencies (for example, USAID), normally have the power to hire staff, acquire goods, and contract work for project implementation. These manag-

ing agencies open special accounts, either at central banks or at commercial banks, for the project funds. These agencies enjoy autonomy, but their expenditures are strictly project related. They are treated as part of the central government,<sup>9</sup> because the central government (normally the ministry of finance) negotiates the loans or grants with the international organizations and assumes the financial liabilities for the projects.<sup>10</sup> For analytical purposes, however, separate identification of the government accounts related to projects financed by international agencies may be necessary.

**3.168** *National universities* are a special case of units providing education services. Even if they are incorporated into the ministry of education and receive most of their funding through the national budget, they normally enjoy a much greater degree of policy and financial autonomy than primary or secondary schools. If the universities are controlled by a central government unit<sup>11</sup> (for example, the ministry of education) and their main source of funding is the central government, their accounts should be part of the central government accounts, even if the universities can freely spend the funds after transfer to their accounts.

**3.169** *Political parties* are normally part of the NPISH sector. However, in single-party states, the relationship between the central government and the government party is so close that the party should be classified within the central government subsector.

### *Special purpose entities*

**3.170** An SPE<sup>12</sup> is created through the transfer of assets, liabilities, or rights to carry out a well-specified activity or series of transactions directly related to the specific purpose for which it was formed. SPEs often are created to securitize assets, pooling financial assets owned by the parent corporation and issuing securities backed by those assets.

<sup>9</sup>In some cases, the loans or grants are extended to a lower level of government, or to a financial institution that acts as the central government fiscal agent. In these cases, the accounts are classified within the corresponding sector (state or local government, or financial corporations).

<sup>10</sup>Moreover, the central government retains the authority to cancel the project at any time.

<sup>11</sup>If controlled at the state level, the university is part of the state government subsector.

<sup>12</sup>Other names given to these units are vehicle companies, special purpose vehicles, financial vehicle corporations, special purpose units, etc.

**3.171** Other SPE arrangements used by governments (in partnership with the private sector) to finance the construction and operation of fixed assets take the form of public-private partnerships and build-operate-transfer (BOT) schemes.<sup>13</sup> Under public-private partnerships, contractors pay the construction costs of public facilities (roads, schools, hospitals, prisons, etc.) and rent the finished projects to the public sector. In a BOT scheme, a private entity receives a franchise from the public sector to finance, design, construct, and operate a facility for a specified period, after which ownership is transferred to the public sector.

**3.172** For an SPE created to securitize financial assets owned by the government, consideration of the sectorization of the SPE should go farther than simply whether it is a legally separate institutional unit with a full set of accounts. If an SPE owned by the government is the legal owner of a portfolio of assets, sells a new financial instrument that represents an interest in the portfolio, and bears credit and commercial risks, the SPE should be included in the other financial intermediaries subsector. If the SPE has a very limited degree of autonomy, the government guarantees its loans (eliminating market and/or credit risk), and the SPE does not effectively transform or intermediate the portfolio, the SPE is treated as an ancillary to the government unit controlling it, and it is classified as part of the central government.

**3.173** For a partnership between the government and the private sector under public-private partnerships or BOT schemes, several issues need to be addressed in deciding on the sectorization of its accounts. Because of complex sharing of risks and returns of the assets, as stipulated in the contracts, the economic owner of the fixed assets often is unclear. Provision for transfer of legal ownership at less than market price at the end of the contract implies that some mechanism within the contract enables the private enterprise to earn a market rate of return. Structured financial arrangements within public-private partnerships sometimes provide for the private sector to take responsibility for the financing and management, but the government often bears substantial risks. An issue may arise as to whether the public-private partnership (or

BOT scheme) is a private nonfinancial corporation, or simply a government agency disguised as an independent unit.

**3.174** Relevant for compilers of monetary and financial statistics is the proper sectorization of the deposit accounts held by SPEs, public-private partnerships, or BOT schemes in the financial sector, and of the loans extended to these entities. For the sectorization, the nature of the economic relationship between the government and the private sector should be carefully analyzed, going beyond the legal arrangements.

#### ***State, provincial, or regional governments***

**3.175** A state, province, or region is the largest geographical area into which a country may be divided for political or administrative purposes. The legislative, judicial, and executive authority of a state government extends over the entire area of an individual state, which usually includes numerous localities. The autonomy, powers, and responsibilities of states vary widely among countries, depending on their political and historical circumstances. In some countries, individual states do not exist.

**3.176** A state government usually has the fiscal authority to levy taxes on institutional units that are resident or engage in economic activities within the state boundaries. To be recognized as a government unit, the entity must be able to own assets, to raise funds, to incur liabilities on its own account, and to spend or allocate at least some of the taxes or other income that it receives. The entity may also receive central government transfers that are for specified purposes. A state government should also be able to appoint its own officers independent of external administrative control. If a regional unit is entirely dependent on funds from the central government, and if the central government dictates the ways in which those funds are to be spent at the regional level, it should be treated as an agency of the central government rather than as a separate institutional unit.

**3.177** The state government subsector consists of state governments that are separate institutional units plus those NPIs that are controlled and mainly financed by state governments. The principal departments and ministries of a state government will constitute a single institutional unit in a manner similar to the core unit of the central government. In addition,

<sup>13</sup>Some countries use the term build-own-operate-transfer (BOOT). There is a wide spectrum of schemes similar to the BOT, such as build-transfer, build-own-operate, build-lease-transfer, build-transfer-operate, contract-add-operate, design-build-finance-operate, develop-operate-transfer, rehabilitate-operate-transfer, and rehabilitate-own-operate.

there may be agencies that operate under the authority of a state government and have separate legal identity and enough autonomy to form additional institutional units. The same considerations that apply to the central government regarding nonmarket NPIs, autonomous agencies, and SPEs are applicable to determination of whether these units are part of the state government subsector or some other sector. State governments may own or control corporations or have other units that engage in market production and which are classified as quasi-corporations.

**3.178** The authority over some institutional units may be shared by two or more states. Such units are included in the state government subsector.

### Local governments

**3.179** The legislative, judicial, and executive authority of local government units is restricted to the smallest geographic areas distinguished for administrative and political purposes. The scope of their authority is generally less than that of the central or state governments, and such governments may or may not be entitled to levy taxes on institutional units or economic activities in their areas. Typical sources of revenue for local governments are taxes on real estate and automobiles, and fees for collective services (for example, trash collection). Local governments are often dependent on grants and transfers from higher levels of government. In some countries, local governments are able to raise funds by issuing bonds. Apart from being entitled to own assets, raise funds, and incur liabilities on their own account, local governments must also have some discretion over their expenditures and should be able to appoint their own officers independent of external administrative controls.

**3.180** Local governments provide a wide range of services to local residents. Typical functions include: (1) educational establishments for which users' fees are small in relation to the cost of providing the service; (2) hospitals and social welfare establishments, such as kindergartens, nurseries, and welfare homes; (3) public sanitation and related entities, such as water purification systems and plants, refuse collection and disposal agencies, cemeteries, and crematoria; and (4) cultural, leisure, and sports facilities, such as theaters, concert halls, museums, art galleries, libraries, parks, and open spaces. Local governments may provide these services directly, or may subcontract with a private corporation.

**3.181** The principles for classifying units at the central and state government levels also apply to the local government subsector. Units such as municipal theaters, museums, and swimming pools should be treated as quasi-corporations if the services are supplied on a market basis. Units supplying services such as education or health on a nonmarket basis remain an integral part of the local government unit to which they belong.

**3.182** Statistics for local governments may cover a wide variety of governmental units, such as counties, municipalities, cities, towns, townships, boroughs, school districts, and water sanitation districts. Local government units with different functional responsibilities often have authority in the same geographic area. Two or more contiguous local governments may jointly organize a government unit that is accountable to these local governments. Such units are included in the local government subsector.

**3.183** Government units serving both a state and one or more local governments are included at the level of government that accounts for the largest share of their operations and financing. In some countries, other levels of government exist between the central government and the lower levels of government. These intermediate levels of government are grouped together with the level of government, either state or local, with which they are most closely associated.

### Social security funds

**3.184** *Social protection schemes* are systematic government interventions intended to relieve households and individuals of the burden of a defined set of social risks. Typical social risks covered by these schemes are: (1) old age, (2) invalidity, (3) death, (4) sickness and maternity, (5) work injury, and (6) unemployment. The government provides the relief in the form of *social benefits*, which are transfer payments (in cash or in kind) provided in a collective arrangement. Social protection schemes cover the community as a whole, or large sections of the community, and generally involve compulsory contributions by employees and/or employers. The terms under which benefits are paid to recipients are determined by the government.

**3.185** A *social security fund* is a particular kind of government unit that is devoted to the operation of one or more social security schemes. Social security funds can be found at all government levels (central,

regional, local). To be treated as independent institutional units, they must be organized separately from the other activities of the government, holding their assets and liabilities separately and engaging in financial transactions on their own account.

**3.186** Depending on the country, social security funds can be very large and play an important role in government policies and the mobilization of financial resources of the entire community. The amounts raised through social security contributions and paid out benefits may be varied to achieve policy objectives that have no direct connection with the concept of a social protection scheme. In some countries, social security funds may become so closely integrated with the other finances of the government as to bring into question whether they should be treated as a separate subsector of the general government.

**3.187** To determine the sectoral classification of a social security fund—as a subsector of general government or as part of a particular level of government—it is crucial to determine the form in which the fund is organized and administered. Because the government can vary social security benefits as part of its overall economic policy, no liabilities are associated with social security schemes, and social security funds are part of the general government sector. If they are separately constituted, the social security funds are treated as separate institutional units. If their management is closely integrated with the government's economic policy, it is more difficult to justify treating them as a separate subsector.

**3.188** Social security funds are distinguished from autonomous pension schemes that are funded by employer/employee contributions and which have benefits that are linked to the contributions. These schemes, operated privately or by the government, are included in the OFC sector.

## Households

*A household is defined as a small group of persons who share the same living accommodation, pool some or all of their income and wealth, and consume certain types of goods and services (mainly housing and food) collectively. Unattached individuals are also considered households. (MFSM, ¶111)*

**3.189** Households often coincide with families, but members of the same household do not necessarily

have to belong to the same family as long as some sharing of resources and consumption exists. Households may be of various sizes and different forms, depending on tradition, religion, climate, geography, and other factors.

**3.190** Servants or other paid domestic employees who live on the same premises as their employer do not form part of their employer's household (even though they may be provided with accommodation and meals as remuneration in kind), because they have no claims upon the collective resources of their employer's household.

**3.191** Persons living in institutions and who are expected to reside in the institutions for long, or indefinite, periods of time are treated as belonging to a single household if they have little or no autonomy of decision making or action in economic matters. Some examples of persons belonging to institutional households are: (1) members of religious orders living in monasteries, convents, or similar institutions; (2) long-term patients in hospitals, including mental hospitals; (3) prisoners; and (4) persons in nursing or retirement homes.

## Households as producers

**3.192** Households may engage in various kinds of economic activity, not merely consumption. Members of households play a major role in production through the operation of their own unincorporated enterprises or through the supplying of labor as employees of unincorporated or corporate enterprises. A household-owned enterprise that is not a corporation or quasi-corporation constitutes an integral part of the household itself.

**3.193** Household sector production takes place in enterprises that are directly owned and controlled by members of households, either individually or in partnership with others. Producer units within the household sector are all *unincorporated*, meaning that the producer unit is not a separate legal entity from the household itself. The assets of an unincorporated enterprise belong to the owner rather than to the enterprise. The owner is personally liable, without limit, for all debts or other obligations incurred in the course of production.

**3.194** Households' unincorporated enterprises may produce for the market or for their own final use.

Some household enterprises are created solely for the purpose of producing goods or services for sale or barter on the market. Other household enterprises operate primarily for production of goods or services for own final use, such as the activities of subsistence farmers, households engaged in the construction of their own dwellings, and domestic services produced directly within the household.

**3.195** Unincorporated enterprises owned by households and engaged in market production are classified in the household sector. If these enterprises qualify as quasi-corporations, they are included in the nonfinancial corporations sector.

### Nonprofit Institutions Serving Households

*The NPISH sector comprises a subset of nonprofit institutions. (MFSM, ¶114)*

**3.196** The majority of NPIs are likely to be nonmarket producers that provide goods or services to their members, other households, or the community as a whole, either free or at prices (or fees) that are not economically significant. Nonmarket NPIs that are not financed and are not controlled government units are called NPIs serving households (NPISH), which constitute a separate sector.

**3.197** NPISH are mainly financed from contributions, subscriptions from members, and earnings on their holdings of financial and nonfinancial assets. The NPISH sector includes two major categories:

- Trade unions, professional or learned societies, consumers' associations, political parties (except in single party states), churches or religious societies (including those financed by the government), and social, cultural, recreational, and sports clubs; and
- Charities and relief (aid) organizations financed by voluntary transfers (in cash or in kind) from other institutional units.

**3.198** Compilers may need to consider borderline cases or misleading designations in deciding whether a unit should be classified as NPISH or a nonfinancial corporation. For example, recreational and sports clubs are classified as NPISH if they are not for profit and are organized as civil associations. However, sports clubs that are organized as private enterprises are classified in the nonfinancial corporations sector. Professional associations can be borderline cases for which it is necessary to determine if they serve households (and therefore are NPISH) or serve corporations.

**3.199** For the monetary statistics, the *MFSM* and this *Guide* combine households and NPISH in the category of *Other resident sectors*.

## 4. Classification of Financial Assets

### Introduction

**4.1** Classification of financial assets is covered in the *MFSM*, Chapter IV. The corresponding chapter in this *Guide* provides a more detailed description of the characteristics of major categories of financial assets—particularly, those financial assets that contain major subcategories that need further description, or for which the asset classification may not always be readily apparent. The recommendations in this chapter are useful for distinguishing, in unobvious cases, between (1) deposits and loans, (2) loans and securities other than shares, and (3) loans and trade credit.

### Deposits

*Deposits include all claims on the central bank, other DCs, government units, and, in some cases, other institutional units that are represented by evidence of deposit. The category of deposits comprises transferable deposits and other deposits. (MFSM, ¶127)*

Loans and deposits, which may have almost identical characteristics, are distinguished on the basis of the representation in the documents that evidence them. (*MFSM*, footnote 8, p. 29)

### General Principles

**4.2** All financial instruments that can be used for direct third-party payments should be classified as transferable deposits, regardless of the designation of the instrument—that is, checking account, current account, giro account, nostro/vostro account,<sup>1</sup> etc. Classification as a loan is precluded, because loans are not usable for third-party transfers. Differentiating between an other deposit (that is, nontransferable

<sup>1</sup>*Nostro account* (“our” account) is terminology for a domestic corporation’s deposit account in a foreign bank; the same account is a *vostro account* (“your” account) from the perspective of the foreign bank that has the deposit liability. Nostro accounts usually are denominated in the national currency of the deposit-taking bank. *Loro account* is another name for *vostro account*.

deposit) and a loan can be more difficult. This *Guide* recommends that *classification as an other deposit or as a loan be based on the instrument characteristics specified in the documentation and the national practice for distinguishing between other deposits and loans*. Regardless of the classification, the financial instrument should have *the same classification in the accounts of the creditor (holder of the financial asset) and the debtor (issuer of the liability)*. Guidance for distinguishing between deposits and loans is provided in Annex 4.1. The guidance is based on contract terms and conditions that differ for deposits and loans. When funds are provided between financial corporations (FCs), the same classification—as an other deposit or a loan—should be used by both FCs.

### Deposit Overdrafts

**4.3** Depositors in some countries are authorized to obtain credit in the form of an *overdraft*—a check or other item in an amount that overdraws a transferable deposit account. Outstanding claims arising from overdrawn deposit accounts should be classified as loans, rather than as negative balances in depositors’ accounts, if the depositors have overdrawn the deposit accounts under pre-authorized overdraft facilities.

### Cashier’s Checks

**4.4** Depository corporations’ (DCs’) customers purchase *cashier’s checks* or similar instruments to use in paying suppliers of goods or services or in settling financial obligations. A cashier’s check is a check drawn on the own account of a DC. It is signed by the DC’s cashier and is made payable to the party specified by the purchaser of the check. Whether purchased with currency or through deposit withdrawal, *a cashier’s check should be included within transferable deposit liabilities of the DC on which it is written*. For deposit classification by sector, *the bank check should be attributed to the economic sector of the purchaser of the check, rather than to the economic sector of the recipient of the check*. If



purchased by a customer in a money-holding sector (see *MFSM*, ¶316–20), the cashier’s check should be included in *transferable deposits included in broad money*. If purchased by central government, a non-resident, or (conceivably) another DC, the cashier’s check should be included in *transferable deposits excluded from broad money*.

**4.5** Less commonly, a DC’s customer may purchase a *bank draft* (sometimes called a *teller’s check*) that is a check or similar instrument written by a DC against funds in its deposit account at another DC. For a bank draft purchased by one of its customers, a DC should record (1) a reduction in deposit liabilities, arising from a withdrawal from the customer’s deposit holdings (or an increase in the DC’s currency holdings, if the check was purchased with cash) and (2) a reduction in its deposit holdings at the DC on which the draft was written.<sup>2</sup> While the bank draft is being held by the purchaser of the draft or is in transit to the payee, it is not included in broad money.

### Margin Deposits

Margins are payments of cash or deposits of collateral that cover actual or potential obligations incurred through financial derivatives—especially futures or exchange-traded options. (*MFSM*, ¶269)

Repayable margin payments of cash are transactions in *deposits*, not transactions in financial derivatives. A depositor has a claim on an exchange, brokerage, or other institution holding the deposit. Some countries may prefer to classify repayable margin deposits within *other accounts receivable/payable* [additional text deleted]. When a repayable margin deposit is made in a noncash asset (such as securities), no transaction is recorded, because no change in ownership has occurred. (*MFSM*, ¶271, revised)

**4.6** *Repayable, or redeemable, margin deposits* placed with DCs to meet the collateral requirements for repurchase agreements, financial derivatives, or other types of financial transactions *should be classified as deposits, regardless of whether these deposits are included in broad money*. Repayable margin deposits placed with other financial intermediaries also should invariably be classified as deposits.

<sup>2</sup>The DC should record a reduction in its deposit holdings at the other DC, even though the corresponding entry will not be made in the other DC’s accounts until the item has been presented for payment through the clearing system.

**4.7** Repayable margin deposits placed in financial auxiliaries are a special case. Depending on national practice, the margin-deposit liabilities of financial auxiliaries—brokers, dealers, clearinghouses for futures contracts, etc.—can be classified as *deposits* or as *other accounts payable—other*.<sup>3</sup> For consistency of record keeping, margin account holders should be informed as to whether their accounts are classified as *deposits* or *other accounts payable—other*.

### Unallocated Gold (and Other Precious Metal) Deposits

*Gold loans* may be undertaken to obtain an income return on gold. The gold that is placed on loan may be either monetary or nonmonetary gold. The gold remains on the books of the gold lender, and the lender retains the exposure to the market risk arising from movements in the market price of gold. Gold loans are not backed by cash collateral and, in some cases, are not backed by non-cash collateral. However, the gold may be on-sold by the borrower. This manual recommends that gold loans be treated as off-balance-sheet items (that is, not recorded as transactions). If the gold is on-sold, however, the on-selling party (that is, the gold borrower) should record a gold transaction, in like manner to gold swaps. **The gold underlying a gold loan is referred to as gold in an allocated account for which an ownership claim on physical gold exists. Gold in an unallocated account, which refers to a gold-denominated claim against a third party (not the physical gold holder), is classified as a financial asset, specifically as a deposit. (MFSM ¶156, revised with bolded text added)**

**4.8** The distinction between allocated and unallocated gold accounts is based on the nature of the account holders’ claims. An allocated gold account is equivalent to a custody record of title to gold, whereas an unallocated gold account is an unsecured claim against a third party who is obligated to deliver a specified quantity of gold of a defined purity (or make a cash settlement).<sup>4</sup> A transaction in unallo-

<sup>3</sup>Trading on the futures exchanges results in a proliferation of margin accounts. Buyers and sellers of futures contracts are required to maintain margin deposit accounts with their brokers. Brokers that are members of the futures exchanges are required to maintain margin deposit accounts at the exchange clearinghouses. Nonmember brokers hold margin deposits at member brokers that transact with the futures clearinghouses on their behalf. Clearinghouse placements of excess funds with DCs are regular deposit accounts, because no margin requirements are involved.

<sup>4</sup>Trading in allocated and unallocated gold takes place in an organized market (in particular, among members of the London

cated gold balances cannot be classified as a transaction in gold, because no change in title to physical gold has occurred.

**4.9** In the methodology of this Guide, *an unallocated gold account is classified as a foreign currency deposit.*<sup>5</sup> In many countries, unallocated gold accounts will represent claims only on nonresidents and therefore will be classified under *Other deposits—In foreign currency—nonresidents.*<sup>6</sup> The same principle applies to an unallocated account for another precious metal (for example, silver or platinum). In the methodology of this Guide, *unallocated accounts for all precious metals are included in foreign currency deposits, and allocated accounts for all metals are included in nonfinancial assets.*<sup>7</sup>

### IMF Securities (Central Bank Only)

**4.10** Deposit liabilities of central banks include the IMF No. 1 and No. 2 Accounts, which are transferable deposits that the IMF holds in central banks of member countries. Securities that have been substituted for No. 1 Account liabilities also should be classified as deposits, because these liabilities have the characteristics of demand deposits rather than securities and, in particular, are encashable on demand by the IMF.

### Reclassification of Impaired Deposits

**4.11** This Guide recommends that *FCs' holdings of impaired deposits—those that are expected to be partially or totally uncollectible—should be reclassified as loans.* In most respects, “nonperforming deposits” (that is, uncollectible deposits) are indistinguishable from “nonperforming loans” (NPLs); impaired deposits have the same characteristics as impaired loans that are not secured by collateral. After reclassification, the loan (formerly, deposit)

Bullion Market Association, a representative body for gold and silver trading) and over the counter. Bullion market turnover is dominated by transfers of financial claims against metal account providers, rather than through transfers of title to allocated gold.

<sup>5</sup>Other depository corporations (ODCs) in a few countries offer deposit accounts for which the interest return is linked to the market price of gold, but without linkage to physical gold. These deposits are also classified as *Deposits—In foreign currency.*

<sup>6</sup>However, any gold-denominated deposit account with a third-party-payment feature would be classified under *Transferable deposits—In foreign currency.*

<sup>7</sup>Conceivably, deposit accounts could arise for financial claims on unallocated commodities other than precious metals.

can be treated indistinguishably from other impaired loans. The expected loss on the loan (formerly, a deposit) is included in provisions for loan losses and in the data for expected loan losses.<sup>8</sup> The reclassification eliminates the need for separate treatment of “nonperforming deposits,” “provisions for deposit losses,” and “expected deposit losses.”

This manual recommends exclusion of all deposit liabilities of nonoperating depository corporations from the monetary aggregates, **if the expectation is that depositors will not have access to the funds within the foreseeable future. These should be classified as restricted deposits (excluded from broad money), if (1) depositors are expected to receive less than the full value of the deposits or (2) the full recovery of deposit funds is expected to occur after a protracted period.** These deposits should continue to be classified as restricted deposits as long as the nonoperating units continue to exist as legal entities. Reorganization, sale, or merger of the affected DCs may result in all or part of the deposits eventually becoming available to depositors. (*MFSM*, ¶308, revised)

[Note: In accordance with the recommendations below, FCs' holdings of deposits in nonoperating DCs should be reclassified as impaired loans.]

**4.12** The reclassification applies to all impaired deposits—both transferable and other (that is, nontransferable)—that are held by FCs, irrespective of resident/nonresident status of the nonoperating institution that is liable for the deposits. The FC (or the receivership for the nonoperating institution) should be informed that, because of impairment, its deposit liabilities have been reclassified as loans. This information should be provided by the FC that is the deposit holder.

**4.13** Special consideration is given to other FCs' holdings of impaired deposits in a nonoperating DC. All deposit liabilities of nonoperating DCs may be excluded from the national definition of broad money. If so, other FCs' impaired deposits in the closed DC can be reclassified as loans without further consideration for compilation of broad money. However, deposit impairment may be recognized before the ODC has closed, or national practice may be to include impaired deposits in broad money, after

<sup>8</sup>The accounting for NPLs and provisions for loan losses and the compilation or the data for expected loan losses are covered in Chapter 5.

closure but before liquidation or reorganization of the DC. In such circumstances, other FCs' deposit claims on the DC still should be reclassified as a loan, and this loan (formerly, deposit) should be recognized as a special component of the broad money holdings of the other FCs.

## Securities Other Than Shares

*Securities other than shares are negotiable instruments serving as evidence that units have obligations to settle by means of providing cash, a financial instrument, or some other item of economic value. (MFSM, ¶134)*

### General Principles

**4.14** In the *MFSM* (and *1993 SNA*) terminology, a financial asset is *negotiable* if it is actively or inactively traded in a secondary market. To qualify as negotiable,<sup>9</sup> securities other than shares must be designed for prospective trading on an organized exchange or in the over-the-counter market, but demonstration of actual trading is not required. Many securities, though negotiable, are held to maturity by the original creditor. Some standard types of securities other than shares are shown in Table 4.1. Examples of securities issued and traded in international markets are described in Table 4.2.

**4.15** For the monetary and financial statistics, FCs' asset holdings in the form of securities other than shares do not need to be disaggregated into short- and long-term categories, or into instrument categories such as those shown in Tables 4.1 and 4.2. FCs' liabilities in the form of securities other than shares need to be disaggregated—by maturity and/or by instrument category—only to the extent necessary to distinguish between those securities included in broad money (if any) and those excluded from broad money. However, disaggregation by maturity or instrument type of the securities other than shares provides useful supplementary data, as indicated in the *MFSM* (¶391) and *1993 SNA* (¶11.58).

<sup>9</sup>A *negotiable instrument* is sometimes legally defined as an unconditional promise or order to pay a fixed amount of money. An ordinary check written on a deposit account would qualify as a negotiable instrument in the legal context, but not in the *MFSM* and *1993 SNA* context.

**Table 4.1. Securities Other Than Shares: Some Standard Types**

#### **Short-term securities sold on a zero-coupon (discount) basis**

- Treasury bills and other securities issued by a central government or its agencies;
- Tax anticipation notes and other securities issued by state and local governments;
- Commercial and financial paper issued by nonfinancial and financial corporations;
- Negotiable certificates of deposit issued by ODCs; and
- Bankers' acceptances.

#### **Long-term securities sold on a fixed-rate coupon basis**

- Central government bonds;
- General obligation and revenue bonds issued by state governments and municipalities;
- Corporate bonds;
- Negotiable certificates of deposit issued by ODCs; and
- Preferred stock (if qualifying as debt rather than equity).

#### **Pass-throughs and other asset-backed securities (including principal-only and coupon-only strips)**

##### **Securities with embedded derivatives**

- Denominated in a foreign currency;<sup>1</sup>
- Variable interest rate (including with interest caps, floors, or collars);<sup>1</sup>
- Interest and/or principal indexed to equity values, commodity prices, or other reference variables;
- Callable at the option of the issuer;
- Puttable at the option of the holder;
- Convertible to equity shares;
- Extendable maturity; and
- Credit derivative features.

<sup>1</sup>Included under the broadest characterization of embedded derivatives.

## Securities (and Other Debt Instruments) with Embedded Derivatives

*An embedded derivative (a derivative feature that is inserted in a standard financial instrument and is inseparable from the instrument) is not considered a financial derivative for monetary and financial statistics purposes. If a primary instrument such as a security or loan contains an embedded derivative, the instrument is valued and classified according to its primary characteristics—even though the value of that security or loan may differ from the values of comparable securities and loans because of the embedded derivative. (MFSM, ¶254)*

**Table 4.2. Securities Other Than Shares: Some Types Traded in International Markets<sup>1</sup>**

**Short-term securities. Eurocurrency instruments, denominated in U.S. dollar, euro, yen, etc.**

- *London certificates of deposit.* Negotiable certificates of deposit issued by a London bank or a London branch of a foreign bank;
- *Euro commercial paper and euronotes;* and
- *Euro bankers' acceptances.*

**Long-term securities. Foreign bonds are those issued outside the domestic market of the borrower.**

- *Global bonds.* Simultaneously placed in the euro and domestic markets;
- *Eurobonds.* Issued by a borrower in a foreign country, denominated in a Eurocurrency (U.S. dollar, euro, yen, etc.), and underwritten and sold by an international syndicate of financial corporations;
- *Brady bonds.* Issued to refinance a developing country's debt to foreign commercial banks; and
- *Floating-rate notes (FRNs).* Medium- to long-term securities with variable rates usually linked to the London interbank rate (offer, bid, or average rate).

<sup>1</sup>For descriptions of these and other instruments, see IMF (2002, Appendixes V and VI).

**4.16** In IAS 39, embedded derivatives are divided into those that *are* closely related to the host instrument and those that *are not* closely related (see IAS 39.AG33 and 39.AG30). The recommendation in this *Guide* is that *an embedded derivative be treated as inseparable from the underlying, or host, instrument irrespective of whether the embedded derivative is closely related or not closely related to the host contract.*<sup>10</sup> The only exception applies to *options that are of a detachable type that can be sold apart from the host instrument.* In this *Guide*, warrants and other detachable options are classified as *nonembedded*, or stand-alone, derivative instruments, which corresponds to the treatment in IAS 39.10.

**4.17** IAS 39.11 states that “An embedded derivative shall be separated from the host contract and accounted for as a derivative under this Standard if, and only if: (a) the economic characteristics and risks of the embedded derivative are not closely related to the economic characteristics and risks of

the host contract . . . ; (b) a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative; and (c) the hybrid (combined) instrument is not measured at fair value with changes in fair value recognised in profit or loss (that is, a derivative that is embedded in a financial asset or financial liability at fair value through profit or loss is not separated).” “Accounted for as a derivative” refers to separation of an embedded derivative for measurement (valuation) purposes, but does not specify the financial asset classification for the embedded derivative. In particular, IAS 39.11 categorically states that “This Standard does not address whether an embedded derivative shall be presented separately on the face of the financial statements.”

**4.18** This *Guide* recommends that *embedded derivatives classified separately or included within the category of financial derivatives, in accordance with national financial reporting standards, should be recombined with the host instrument in the accounts of the monetary and financial statistics.* The total value of the hybrid (combined) instrument is defined as the sum of the host instrument value and the embedded derivative value, if separate values have been estimated for the host instrument and embedded derivative.

### Pass-Through and Other Asset-Backed Securities

**4.19** *Asset-backed securities* are created through the *securitization* of various categories of loans, or through *double securitization*—the packaging and selling of securities that already are backed by other securities. *Pass-through securities* that are backed by fixed-rate mortgage loans are a prominent type of asset-backed securities. An FC that originates residential mortgage loans may pool some of these assets and sell units, or portions, of the mortgage loan pool to investors. The units acquired by the investors are the mortgage-backed securities. The interest and principal payments made by the mortgagees within the pool are directly passed through to the investors who hold the mortgage-backed securities.<sup>11</sup>

<sup>10</sup>The recommendations in this section also apply to loans, deposits, and equity shares that have embedded derivatives.

<sup>11</sup>A more recent development has been the securitization of other type of loans—adjustable-rate mortgage loans, credit card receivables (certificates of amortized revolving debt), car loans (collateralized automobile receivables, or CARs), commercial and industrial loans, etc. In addition, corporate bonds (including junk bonds, which have relatively high default risk) have been securitized.

**4.20** A major source of uncertainty about the future cash flows from mortgage-backed securities arises from prepayment of residential mortgage loans in the pool. Homeowners may have the right to prepay the entire amounts of their mortgage loans without incurring prepayment penalties. Absence of prepayment penalties provides incentives for homeowners to refinance their homes when interest rates on new mortgage loans are below the interest rates on their existing mortgage loans. Other prepayments arise from relocation, when mortgagees sell their homes, liquidate their existing mortgage loans,<sup>12</sup> and acquire new homes and new mortgages. The prepayments have significant implications for mortgage lending and mortgage pass-through securities, given the risk that increases in prepayments will decrease the prevalence of interest payments and will accelerate the repayment of principal within the mortgage loan pool. From an accounting perspective, prepayments complicate the valuation of mortgage-backed securities, as described in Chapter 5.

**4.21** *Collateralized mortgage obligations (CMOs)* are securities that are designed to attract investors who have differing sensitivities to prepayment risk,<sup>13</sup> depending on their individual portfolio management objectives for acquiring mortgage pass-through securities. A CMO can be backed by direct securitization of a mortgage loan portfolio or by double securitization—backing in the form of a new or outstanding issue of mortgage pass-through securities. The distinguishing feature is that the securities issued as a CMO are divided into classes—for example, Class A, Class B, and Class C—which provide progressively less protection against prepayment risk. All prepayments from the CMO mortgage loan pool are channeled to the Class-C securities until those in Class C are fully repaid. Subsequent repayments are passed through to the Class-B securities investors. Prepayments are passed through to the Class-A securities holders only after all Class-B securities have been retired. The bonds pay a guaranteed or fixed-coupon

<sup>12</sup>The life of a mortgage loan can be extended, if it is *assumable*—that is, if the new homeowner is entitled to become the new mortgagee under the home seller’s existing mortgage loan contract.

<sup>13</sup>A CMO is distinguished from a *collateralized debt obligation (CDO)*. Both CMOs and CDOs are designed with tranches for investors with different sensitivities to risk. For a CMO, prepayment risk is the relevant risk; for a CDO, it is credit risk. The investors in each CDO tranche contract for a portion of the credit risk, which is allotted to CDO tranches in the same manner that prepayment risk is allocated to CMO classes.

rate that varies across classes. The Class-A coupon rate is less than the Class-B rate, which is less than Class-C rate—thereby rewarding Class-C securities holders for the highest risk of prepayments and, to a lesser extent, rewarding the Class-B securities holders for assuming prepayment risk that is greater than for Class-A securities.<sup>14</sup>

**4.22** FCs sometimes purchase bonds or similar instruments, *strip* the coupon payments, and sell the future cash flows to separate investors—that is, the *principal only (PO)* claim sold to one investor and *coupon only (CO)* claims sold to one or more other investors. The principal and periodic coupon payments for the original bonds have been transformed into a series of zero-coupon bonds, with maturities matching the redemption date for the principal and coupon payment dates for the original bonds. The PO- and CO-strip investors receive the cash flows from the bonds on a pass-through basis. The FC records liabilities (classified under *securities other than shares* and subclassified by economic sector of holder) for the cash flows that the FC stripped and sold. Alternatively, the strips can be created at the initiative of the securities issuer. FCs are purchasers, as well as creators, of PO and CO strips.

**4.23** PO and interest-only (IO) strips are also created through securitization of mortgage-loan pools in a special form of a CMO. The IO-strip investors receive cash flows from the periodic interest payments received from the mortgage loan pool, and the PO-strip investors receive the principal portions of the periodic payments. The cash flows and yields for the PO and CO strips, like those for other pass-through securities backed by mortgage loans, are influenced by loan prepayments.

**4.24** A *mortgage-backed bond (MBB)* is an asset-backed instrument that differs from pass-through securities and CMOs with respect both to the treatment of cash flows and to the institutional arrangements. MBBs are backed by mortgage loans that provide collateral, but no direct linkage exists between the cash flows from the mortgage loans and the principal and interest payments on the MBBs.

<sup>14</sup>CMOs sometimes have Z or R Classes. For Z-Class bondholders, all cash flows—coupon and principal payments plus accrued interest—are received as lump sums after all other classes are retired. Investors in R-Class (that is, residual-class) CMOs receive whatever principal and reinvestment income remains in a CMO trust, after all other classes have been retired.

The mortgage loans remain on the MBB-issuing FC's balance sheet, but in a segregated portfolio that is monitored by a *trustee* who assures that the market value exceeds the principal amount of the MBBs. In contrast, pass-throughs and CMOs are often originated by selling a mortgage loan portfolio to a *trust* or other type of vehicle company<sup>15</sup> that then issues the asset-backed securities.

**4.25** As a general rule, *securitized debt instruments (loans or securities other than shares) should be included in the liabilities on the balance sheet of the asset-backed securities issuer*—that is, the debt-instrument originator or a vehicle company to which the debt instruments were sold—*irrespective of whether the holders of asset-backed securities have a direct or indirect claim on the cash flows from the securitized assets*. An exception may apply to stripped securities, depending on whether the PO and CO strips were created by:

- The securities holder that created the strips assuming the liabilities to the PO- and CO-strip holders, and the original security issuer retaining the liability for the unstripped securities; or
- The original securities issuer's liability for the unstripped securities being replaced by that issuer's liabilities for the PO and CO strips.

The general rule applies in the first case; that is, the FC that created the strips shows liabilities to the PO and CO purchasers, while continuing to show the asset represented by the original security issuer's obligation. *The exception applies in the second case, which represents the creation of PO and CO strip securities to replace the original securities obligation of the debtor*. The debtor who issues the PO and CO securities may retire the original securities or may leave them in a repository (for example, a settlement or clearing facility) on a “dormant basis” until such time when the securities are reissued or redeemed. In the meantime, the original securities should be recorded off balance sheet (by both the debtor and the repository) to avoid double counting of the debtor's liability. If issued by the original debtor, the strip-like securities are more appropriately viewed as a new issuance of a set of zero-coupon securities, rather than as strips, given that these are stand-alone securities that are not backed by the original

securities. In all cases, *strip (or strip-like) liabilities should be recorded in the appropriate institutional subcategories*—that is, on the basis of residency and economic sector of creditor—within the category of *securities other than shares*.

## Loans

*Loans are financial assets that (1) are created when a creditor lends funds directly to a debtor and (2) are evidenced by non-negotiable documents. (MFSM, ¶139)*

Loans that have become negotiable de facto should be classified under securities other than shares. (MFSM, ¶134)

## General Principles

**4.26** The general principle that “de facto negotiable” loans should be reclassified as securities other than shares may be difficult to apply in some circumstances. In this *Guide*, the recommendation is that *the reclassification as securities other than shares should be made whenever it is reasonable to expect that an unimpaired loan will be traded in the secondary market*. A separate recommendation applies to *nonperforming loans (NPLs) or otherwise impaired loans, which should be classified as loans, despite the intent to sell or the actual sale of the loans in the secondary market*. The reclassification as securities other than shares applies to both short- and long-term loans and does not depend on whether the time of prospective trading is known or unknown, or on whether the secondary-market sale is expected to take place in the near future or closer to maturity. Some loan contracts contain standardized terms and conditions that are tailored to making the loans attractive for secondary market trading. Such loans are prime candidates for reclassification as securities other than shares. However, secondary markets for loans with more diverse contract features may also exist.

**4.27** A *secondary loan market* is characterized by one or more dealers (or brokers) who stand ready to undertake (or arrange) the purchase and sale of loans on a regular, ongoing basis. Strong evidence of the existence of a secondary market is provided by the dissemination of bid-ask price quotations, representing the prices at which the secondary-market maker is prepared to purchase or sell loans with standard-

<sup>15</sup>*Trusts* and other types of *vehicle companies*—often called *special-purpose vehicles*—are described in the *MFSM*, ¶72, 100, 102–105, and in Chapter 3 of this *Guide*.

ized terms and conditions. However, secondary markets may also exist for loans purchased and sold in the absence of bid-ask prices that are widely advertised. Secondary market transactions include the sale of individual loans and loan portfolios.

### Impaired Loan Trading

**4.28** Loans sold in secondary markets range from high-quality loans (those with little credit risk) to NPLs or otherwise impaired loans for which repayment is highly uncertain, or even unlikely. Transactions in NPLs or otherwise impaired loans often involve purchases of portfolios of substandard loans at deep-discount prices (that is, at well below the book value, or carrying amount, of the loans), reflecting the potential default on interest and principal payments for significant proportions of the loan portfolios purchased. In this *Guide*, it is recommended that *a substandard loan that has been purchased at a fraction of book value should be recorded as a loan (valued at the discounted purchase price) and should not subsequently be reclassified as securities other than shares*. Similarly, *a portfolio of substandard loan assets that potentially may be “factored” (that is, sold at a fraction of book value) should not be reclassified as securities other than shares*. Even though these loan sales could be classified as secondary-market transactions, it is advantageous to retain the loan classification for these assets to facilitate the future posting of provisions for loan losses, when necessary.

### Loan Origination and Onetime Sale

**4.29** An FC may specialize in originating loans that are to be sold (usually, shortly after origination) to another FC that intends to hold the loans to maturity. *It is recommended that these loans should not be reclassified as securities other than shares, but rather should be viewed as the product of a two-step loan origination.*

### Loan Participations

**4.30** A *loan participation* occurs when two or more investors (usually, FCs) jointly fund a loan to a single borrower, either through a *loan syndication*—a loan origination by a syndicate, or group, consisting of a lead firm and one or more other creditors who jointly fund the loan—or through purchase of portions of an outstanding loan that was originated by one creditor.

*Each syndicate member records the amount of the loan participation that the member has funded.*

**4.31** A loan participation should be disaggregated by economic sector of the debtor and each creditor. Debtor/creditor relationships for loan participations are determined by legal arrangements. If the loan participation is on an *assignment basis* (the most prevalent type), each participant has a direct creditor claim on the debtor. If the loan participation is on a *nonassignment basis*, the initial contract between a single creditor and the debtor remains intact, but the original creditor incurs a liability to each purchaser of a participation in the loan. The entries for the loan transactions are:

- *Assignment basis.* Each participant classifies the amount of the loan participation as a direct claim on the original debtor. The debtor records the loan participations as *individual liabilities*, disaggregated by economic sector of the participant. The originator of the loan participation would show a claim on the debtor only to the extent that the originator retained a participation in the loan.
- *Nonassignment basis.* The original debtor/creditor relationship remains intact, and a new set of debtor/creditor relationships is created. The original creditor continues to record a claim on the debtor, and the debtor continues to record a liability to the original creditor—in the full outstanding amount of the loan. In addition, the original creditor records a liability to each participant in the outstanding amount of participation, *classified by economic sector of the participant*. Each participant shows the outstanding amount of the participation as a claim on the original creditor, *classified by the economic sector of the original creditor*.

**4.32** *Loan participations that, after initial purchase, are to be held to maturity should continue to be classified as loans. However, if intended for secondary-market trading, all syndicate participations should classify the loan participations as securities other than shares, resulting in the single classification, as securities other than shares, for the entire syndicated loan.* Collection and disbursement of the interest and principal payments are usually on a *pass-through basis*. The FC that sold the loan participations (or its agent) receives the interest and principal payments from the debtor and, for a fee, passes the payments to the loan participants (even if the seller of the loan participations no longer holds a participation share). Participations that are subject to secondary-market

trading are within the broad category of pass-through securities, and those arranged on a nonassignment basis are within the subcategory of asset-backed securities.

### Trade Bills and Bankers' Acceptances

**4.33** A *bill of exchange* is an unconditional order written and signed by one party (drawer of the bill), requiring the party to whom it is addressed to pay on demand, or at a fixed or determinable future time, a specified sum to order or to the bearer. Bills of exchange—sometimes called *trade bills* or simply *bills*—are most often associated with foreign trade, but they also may be used for domestic trade. Bills of exchange are often called *sight drafts* or *time drafts*, depending on whether payable on demand or payable by a specified future date. A bill of exchange is an *order to pay*, rather than a *promise to pay*. When it is received and “accepted”—stamped<sup>16</sup> and signed—by the party on whom it is written (that is, the drawee), the bill of exchange becomes a promissory note and is designated as an *acceptance*.<sup>17</sup>

**4.34** An *acceptance* is classified within loans or securities other than shares, depending on the characteristics of the credit instrument. *Bankers' acceptances* (BAs) are those acceptances that are eligible for rediscounting (that is, sale) in the secondary market. BAs usually have original maturities of 180 days or less and satisfy requirements that make them eligible for rediscounting.<sup>18</sup> This *Guide* recommends that *those acceptances that are eligible for rediscounting in a secondary market should be designated as BAs and classified as securities other than shares, and those ineligible for rediscounting should be designated as other acceptances and be classified as loans*. Export credit refinancing facilities of some central banks may provide for the rediscounting of acceptances that are ineligible for trading in the BA market. This *Guide* recommends that *all acceptances eligible for central bank rediscount should be classified as securities other than shares*.

<sup>16</sup>Traditionally, a stamp and signature were required, but modern drafts may not be stamped.

<sup>17</sup>An ordinary check written on a bank is a bill of exchange that, because it is payable on demand, is sometimes called a *sight draft*. A bank “accepts” a check by making the ordered payment.

<sup>18</sup>Sight drafts are priced at face value, and time drafts are priced on a discount basis. Resale in the secondary market is called *rediscounting* of the acceptance.

**4.35** Balance-sheet entries arise from DCs' holdings of BAs, other trade bills, and loans made under acceptances.<sup>19</sup> The loans and securities created through acceptances include:

- *Exporter credit*. The drawer (exporter) may hold the acceptance and, at maturity, receive payment (normally channeled through the exporter's bank) from the drawee (importer). The drawer would classify the acceptance as a loan to the drawee, because acceptances are interest-bearing instruments.<sup>20</sup>
- *Export bill*. Instead of holding the acceptance, the drawer (exporter) may rediscount the acceptance at a DC that, in turn, may hold the acceptance to maturity. If ineligible for further rediscounting, the acceptance should be classified as a loan that the DC has extended to the drawee (importer). If eligible for rediscount in the BA market and/or at the central bank, the acceptance should be classified within *securities other than shares* and, for purposes of sectoral classification, should be attributed to the economic sector of the drawee (importer), who is the original issuer.<sup>21</sup>
- *Import bill*. An importer may arrange an acceptance that calls for the exporter to be paid from the proceeds of a loan that the importer obtains from an ODC that will make the payment. In this case, the ODC is the drawee of the draft. For example, the draft might show “180 days sight,” meaning that the bank (drawee) is obligated to pay the exporter at sight—that is, immediately upon presentation of the draft—and that the bank expects to be repaid by the importer in 180 days. The credit advanced to the importer is classified as a loan in the category of *loans made under acceptances*. The loan remains in the DC's loan portfolio until repaid by the importer, but the acceptance—showing the DC's promise to pay the face amount of the draft at maturity—can be sold in the BA market (or possibly rediscounted at the central bank). When the DC rediscounts the acceptance, it records a liability for *own accep-*

<sup>19</sup>DCs provide a variety of off-balance-sheet services for bills of exchange and acceptances, including *letters of credit* (L/Cs) that support the origination of bills of exchange and cross-border transmission of documentation for the bills and acceptances.

<sup>20</sup>The acceptance would qualify as trade credit in the unlikely event that it were interest-free.

<sup>21</sup>The party that originally accepted the draft has the underlying obligation for the BA. In the event of default by that party, the holder of the BA at maturity has recourse to all other parties in the chain of purchase and resale of a BA.



*tances* within securities other than shares,<sup>22</sup> classified as a liability to the economic sector of the purchaser in the BA market.

- *Banker's acceptances.* Export and import bills that meet the BA eligibility requirements are sold to BA investors, principally to FCs, nonfinancial corporations, and nonresident institutions. For classification by debtor, the BA should be attributed to the economic sector of the drawee of the bill of exchange. For example, the BA based on an export bill drawn on an importer should be classified within securities other than shares issued by nonfinancial corporations (assuming the importer is a nonfinancial corporation). The purchaser of a BA that originated as an import bill drawn on an ODC should classify the BA within securities other than shares in the subcategory for claims on ODCs.
- *Own acceptances.* A DC may repurchase *own acceptances* that it earlier issued in the BA market. Holdings of own acceptances, representing a DC's liability on itself, should be deducted from the liability account for *BAs outstanding*. The repurchased own BAs can be reintroduced as a liability, if the DC decides to rediscount them in the BA market during the remaining term to maturity.

### Financial Leases

Through financial leases, all the risk and rewards of ownership are transferred from the legal owners of goods (lessors) to users of the goods (lessees). Financial leases are classified as loans. (MFSM, ¶141)

**4.36** Financial leases (sometimes called capital or full-payout leases) are classified as loans, because financial leases and loans are similar in substance.

### Annuities

**4.37** In general, an *annuity* is a financial asset for which the purchaser makes a single payment or series of installment payments that entitle the purchaser to receive fixed or variable payments in the future. From the lender's perspective, an amortized mortgage loan or consumer installment loan can be characterized as a form of annuity. However,

<sup>22</sup>These liabilities are designated as *obligations under acceptances*, *acceptances outstanding*, *own acceptances*, or by some other name.

*annuities* constitute a distinct category of financial assets that FCs—still most prominently, insurance corporations—sell to investors who are accumulating savings for retirement. In many countries, the earnings on annuities are not taxed until the annuity purchaser receives payments from the annuity. The cash flows to be received from annuities are structured in various ways—a lump-sum payment, payments over a specified number of years, payments that cease upon the investor's death, or payments that continue and are paid to the investor's beneficiary.

**4.38** Traditionally, annuities have been nontraded instruments with fixed rates, but annuities trading in over-the-counter markets has developed, and variable-rate annuities have become available in some countries. This *Guide* recommends that *non-traded annuities should be classified as Loans*, and *annuities designed for secondary-market trading should be classified as securities other than shares*.

### Credit-Card Debt

**4.39** Credit cards are used by two categories of card holders: those who use the cards strictly as a convenient means of payment for their purchases and those who use the cards as a means of financing their purchases. Card holders in the first category normally do not incur financing charges, if the entire balance due for their credit-card purchases is paid within each monthly billing cycle. The non-interest-bearing obligations incurred by these card holders constitutes a form of trade credit provided by the card issuer. Card holders in the second category, who carry credit-card balances on a month-to-month basis, are charged interest on all outstanding balances, including the balances generated by new credit-card purchases during the month leading up to the billing.

**4.40** This *Guide* recommends that, if practical, *all interest-bearing card balances* should be classified as *Loans*, and *all non-interest-bearing card balances* should be classified as *Accounts receivable/payable—trade credit and advances*, which is disaggregated by economic sector (reflecting the use of credit cards by governments and corporations, as well as households). Provision of separate data on interest-bearing card balances is especially important, if weighted-average data for credit-card interest rates are to be compiled for analysis of the demand for credit-card credit.

## Shares and Other Equity

*Shares and other equity comprise all instruments and records acknowledging, after the claims of all creditors have been met, claims on the residual value of a corporation. Ownership of equity is usually evidenced by shares, stocks, participations, or similar documents. This category includes proprietors' net equity in quasi-corporations, as well as shares and equity in corporations. It also includes preferred stocks or shares that provide for participation in the residual value on dissolution of an incorporated enterprise. (MFSM, ¶165)*

### Shares and Other Equity Holdings

**4.41** *Shares* (often called *common stock*) of a corporation may be widely held among many investors, closely held among a few investors, held within a single family, or held exclusively by one corporation or an individual. Shares in a corporation may be actively or inactively traded on a securities exchange, traded in an over-the-counter market, or nontraded. Shares are classified within *shares and other equity* even if the intention to trade them is absent, whereas nontraded securities other than shares are classified as loans. Share holdings of FCs include shares of their own subsidiaries, as well as shares of unrelated corporations. Financial holding corporations (see *MFSM*, ¶70) hold shares of subsidiaries (principally, FCs) that the holding companies own and control. Subject to national law and regulation, FCs may hold shares in DCs, OFCs, nonfinancial corporations, and foreign corporations. In a few countries, FCs (and, in some countries, other investors) hold central bank shares.

**4.42** Corporations sometimes purchase their own shares in the market. The reacquired shares (called *treasury shares*) are not classified as asset holdings—that is, as an FC's claim on itself—but rather are deducted from *funds contributed by owners* within the liability account for shares and other equity.

**4.43** *Other equity* is principally in the form of the accumulation of *proprietor's net additions to the equity of quasi-corporate enterprises*—that is, funds or other resources (including fixed or other assets) that the owners provide for capital investment by quasi-corporate enterprises *less* withdrawals from quasi-corporate enterprises, which include proceeds from the sale of fixed or other assets, transfers of fixed or other assets, and funds taken from accumulated savings and reserves for the consumption

of fixed capital. For quasi-corporations, all equity (including retained earnings and reserves) is assumed to be held by the owners. In some cases, the owners may provide quasi-corporation financing through the extension of loans, placement of deposits, purchase of debt securities issued by the quasi-corporation, or provision of trade credit to the quasi-corporation. The owners and the quasi-corporations should record such claims/liabilities as loans, deposits, etc., rather than as additions to the equity of the quasi-corporations.

**4.44** In the *1993 SNA* and the *MFSM*, financial transactions related to immovable assets and unincorporated enterprises owned by nonresidents are classified as transactions in shares and other equity. For a quasi-corporation that is a direct investment enterprise wholly owned by nonresidents (for example, a foreign branch of a domestic FC), it is assumed that all retained earnings of the quasi-corporation (foreign branch) are treated *as if* the retained earnings were remitted to the parent enterprise (domestic FC) and then reinvested as a net addition to the quasi-corporation's net equity. If the direct investment quasi-corporation is partly owned by nonresidents, only that portion of retained earnings proportional to the degree of ownership is imputed to be paid and reinvested. The same assumptions are made for incorporated enterprises; retained earnings are assumed to be remitted in proportion to the percentage of the equity owned by nonresidents, and the reinvestment is recorded in shares and other equity.

### Shares in Investment Pools

*Investment pools* are institutional units that are organized financial arrangements, excluding pension funds, that consolidate investor funds for the purpose of acquiring financial assets. Examples are mutual funds, investment trusts, unit trusts, and other collective investment units. (*MFSM*, ¶100)

Mutual funds sometimes offer accounts with unrestricted check-writing privileges; these are functionally close to transferable deposits. Mutual fund instruments with these characteristics should be classified as transferable deposits. (*MFSM*, ¶129)

[Money market funds] . . . invest only or primarily in short-term money market securities such as treasury bills, certificates of deposit, and commercial paper. Shares in some money market funds are transferable and, in such cases, would qualify for inclusion in broad money. Non-transferable shares in money market funds may also be included in broad-money aggregates . . . (*MFSM*, ¶314)

[Note: In this *Guide*, the recommended classification as deposits is extended to explicitly encompass all money market fund shares included in the national definition of money. Nontransferable shares in money market funds included in broad-money aggregates should be classified as other deposits included in broad money.]

**4.45** Shares in most *investment pools* (also called *investment funds*) are classified as shares and other equity, regardless of the type of assets held by the investment fund—securities other than shares (*bond funds*), common and preferred shares (*equity funds*), bonds and shares (*hybrid funds*), or mortgages and mortgage corporation shares (*real estate investment trusts*, or REITs). An exception is money-market fund shares that are included in the national definition of money and that are to be classified as transferable deposits (if offering unrestricted third-party-payment privileges) or as other deposits (if nontransferable).

**4.46** The shares in investment pools are included in shares and other equity, regardless of whether the number of shares is fixed (*closed-end fund*) or varies over time (*open-end fund*).

**4.47** Investment pools are organized as corporations, limited partnerships (many *hedging funds*), special purpose vehicles, or as sets of accounts within DCs, insurance corporations, or other categories of FCs.

### Depository Receipts

**4.48** Equity shares include *depository receipts* (DRs)—securities that evidence ownership of shares in foreign corporations—as well as directly owned shares of corporations.<sup>23</sup> Creation and sale of DRs for shares issued in Country A involves several parties: (1) a custodian bank in Country A; (2) brokerage houses in both Country A and Country B (where the DRs will be issued); (3) a DC that is located in Country B and that will issue the DRs in Country B; (4) the investor who purchases the DRs; and, if the DRs are exchange-traded, (4) the stock exchange on which the DRs are listed in Country B.

<sup>23</sup>The most common categories are *American depository receipts* (ADRs) and *Global depository receipts* (GDRs), both most often denominated in U.S. dollars, but sometimes in euros. ADRs are traded on U.S. exchanges such as the New York Stock Exchange and American Stock Exchange, and GDRs are commonly listed on European stock exchanges such as the London Stock Exchange. Other categories are *European depository receipts* and *International depository receipts*. Based on a determined ratio, each DR may be issued as representing a single share of the underlying equity, or more than one share.

**4.49** Creation of DRs involves the following actions:

- A brokerage house in Country B purchases the equity shares, through its international office or a local brokerage house in Country A, and has the shares delivered to a custodian bank in Country A.<sup>24</sup>
- The custodial bank in Country A verifies delivery of the shares by informing the DC in Country B that its can now the issue DRs.
- The DC in Country B delivers the DRs to the brokerage house in Country B—the party who initiated the creation of the DRs.

**4.50** After issuance, DRs can be traded freely among investors, either on a stock exchange or over the counter. The brokerage house that initiated the DRs transfers the securities to a seller—a stock-exchange member or an over-the-counter dealer through a procedure called *intramarket trading*—or the brokerage house sells the DRs directly to investors.

### Shares and Other Equity—Liability Account for the Monetary Statistics

In the context of the monetary statistics in Chapter 7 of this manual, FCs' total liabilities in the form of shares and other equity are divided into the following separate components:

- *Funds contributed by owners* include the total amount from the initial and any subsequent issuance of shares, stocks, or other forms of ownership of corporations and quasi-corporations.
- *Retained earnings* constitute all after-tax profits that have not been distributed to shareholders or appropriated as general or special reserves.
- *General and special reserves* are appropriations of retained earnings.
- *SDR allocations* are the counterpart to the SDRs that have been provided by the IMF to central banks—the only FCs that receive SDR allocations.
- *Valuation adjustment* shows the net counterpart to changes in the value of assets and liabilities on the balance sheets of FCs, **excluding those changes in value (that is, gains or losses) that are recorded in net profit or loss for the period.** (*MFSM*, ¶166, revised)

[Note: The bolded text does not appear in the *MFSM* and has been added for clarification.]

**4.51** In principle, net profit or loss can be transferred to retained earnings in each period, as the profit or loss is recorded. In practice in many coun-

<sup>24</sup>The custodial bank is a correspondent bank or an overseas branch of the DC issuing the DRs.

tries, net profit or loss is transferred to retained earnings on a quarterly or annual basis. In the periods between transfers to retained earnings, profit or loss is transferred on a cumulative basis to a separate account within shares and other equity. In national financial reporting standards, this account may be designated as *results for the period* or *accumulated profit or loss* or by some other name. In the reported data for the monetary statistics, *retained earnings* should include all profit or loss that has accumulated in the current and previous periods, including amounts in accounts such as *results for the period* that have not been officially transferred to retained earnings.

### Insurance Technical Reserves

*Insurance technical reserves consist of net equity of households in life insurance reserves and pension funds and prepayments of insurance premiums and reserves against outstanding claims. All these items are considered assets of beneficiaries and policyholders. (MFSM, ¶168, corrected)*

#### General Principles

**4.52** The category of *insurance technical reserves* is used to account for specific types of liabilities issued by insurance corporations (and quasi-corporations) and pension funds and assets in the form of prepayments of insurance premiums that constitute claims on insurance corporations. The term *insurance technical reserves* applies to the liabilities of pension funds, because a pension fund is a form of social insurance scheme. *1993 SNA* states:

Social insurance schemes are schemes in which social contributions are paid by employees or others, or by employers on behalf of their employees, in order to secure entitlement to social insurance benefits, in the current or subsequent periods, for the employees or other contributors, their dependents or survivors. They may be organized privately or by government units. Social insurance benefits may be provided in cash or in kind. . . . (¶8.55)

A social insurance scheme is one where the policyholder is obliged or encouraged to insure against certain contingencies by the intervention of a third party. For example, government may oblige all employees to participate in a social security scheme; employers may make it a condition of employment that employ-

ees participate in an insurance scheme specified by the employer; an employer may encourage employees to join a scheme by making contributions on behalf of the employee; or a trade union may arrange advantageous insurance cover available only to the members of the trade union. . . . (Annex IV, “The treatment of insurance, social insurance and pensions,” ¶5)

**4.53** Social insurance schemes include *social security schemes*, which are schemes that are imposed and controlled by government units, cover the entire community or large segments of it, and generally involve compulsory contributions by employees, employers, or both. Social security schemes are not covered in this chapter.<sup>25</sup>

**4.54** This chapter deals mainly with the classification of asset and liability accounts of insurance corporations and pension funds in the FCs sector, as reflected in the sectoral balance sheets in the monetary statistics. The accounts within *insurance technical reserves* receive separate treatment, owing to the specialized treatment of these accounts in national financial reporting standards and the macroeconomic statistics. Except for *prepayments of insurance premiums* and *reserves against outstanding claims*, the accounts within *insurance technical reserves* appear only as liabilities in the balance sheets of insurance corporations or pension funds.

**4.55** Insurance corporations disaggregate their asset holdings into separate portfolios for reserve assets—a pool of assets earmarked for meeting the insurance claims of policyholders—and own assets—a pool of assets funded from retained earnings and equity contributions by owners of the insurance corporation and excluded from the calculations pertaining to the wherewithal to meet the future obligations to policyholders. Reserve assets of insurance corporations consist of financial assets such as deposits, loans, and securities, as well as nonfinancial assets such as land and buildings. Insurance corporations’ holdings of own assets have the same classifications as those in the reserve asset portfolio—financial assets such as deposits, loans, securities, etc. and nonfinancial assets. Distinguishing between reserve assets and own assets is important for managerial and supervisory analysis of the solvency of insurance

<sup>25</sup>For more on social security schemes, see *1993 SNA*, ¶4.111–112; *1993 SNA Annex IV*, ¶34–35 and Table A.IV.1; and IMF, *Government Finance Statistics Manual 2001 (GFSM)*, Annex to Chapter 2.

corporations. Data on the investment income<sup>26</sup> from the reserve assets are needed for the calculation of property income attributed to insurance policyholders in the context of the national accounts statistics.

**4.56** The distinction between *reserve assets* and *own assets* of insurance corporations does not enter into the classification of the financial and nonfinancial assets as presented in the balance sheets for the monetary (and financial) statistics. *For the monetary and financial statistics, the assets of insurance corporations are classified only by asset category—deposits, loans, securities other than shares, shares and other equity, financial derivatives, other accounts receivable, and nonfinancial assets—disaggregated where applicable by national/foreign currency of denomination and by economic sector. For each disaggregated asset category, the total amount outstanding is the sum of the outstanding amounts in the reserve assets and own assets portfolios.* This rule applies to the asset holdings of both life and nonlife insurance corporations.

**4.57** Similar rules apply to the classification of the assets held in pension funds. Separate rules are specified for two types of private-funded pension schemes:

- *Autonomous pension schemes.* An autonomous pension fund constitutes a separate institutional unit. To qualify as an institutional unit, the pension fund must have its own separate balance sheet and must be managed separately from the operations of the single employer or multiple employers<sup>27</sup> whose employees are covered by the

pension plan. *For the monetary and financial statistics, the assets of an autonomous pension fund are classified by asset category—deposits, loans, securities other than shares, etc. (including non-financial assets)—disaggregated where applicable by national/foreign currency of denomination and by economic sector.*<sup>28</sup> *Prepayments of insurance premiums are recorded in the separate asset account within insurance technical reserves.*<sup>29</sup>

- *Nonautonomous funded pension schemes.* A non-autonomous funded pension fund is classified in the same institutional sector as the employer who has organized it.<sup>30</sup> A distinguishing feature is that the pension assets are segregated from the employer's own funds (non-pension-plan assets). The nonautonomous pension plan, though at least partially funded, may be either underfunded or overfunded.<sup>31</sup> *For the monetary and financial statistics, the assets of a nonautonomous funded pension plan are classified by asset category—deposits, loans, securities other than shares, etc. (including nonfinancial assets)—disaggregated where applicable by national/foreign currency of denomination and by economic sector. After appropriate classification, the pension-plan assets and non-pension-plan assets in each category are*

<sup>26</sup>“Insurance technical reserves are invested by insurance enterprises in various ways. They are commonly used to purchase financial assets, land or buildings. The insurance enterprises receive property income from the financial assets and land, and earn net operating surplus from the renting or leasing of residential and other buildings. The total of the primary incomes received in this way from the investment of insurance technical reserves is described as *investment income*. It does not, of course, include any income received from the investment of insurance enterprises' own assets. However, as the technical reserves are assets of the policyholders, the investment income receivable by insurance enterprises must be shown in the accounts as being paid by the insurance enterprises to the policyholders. . . . However, this income is retained by the insurance enterprises in practice. It is therefore treated as being paid back to the insurance enterprises in the form of premium supplements. . . .” (1993 SNA, ¶7.124)

<sup>27</sup>As defined in IAS 19.7, “*Multi-employer plans* are defined contribution plans (other than state plans) or defined benefit plans (other than state plans) that: (a) pool the assets contributed by various entities that are not under common control; and (b) use those assets to provide benefits to employees of more than one entity, on the basis that contribution and benefit levels are determined without regard to the identity of the entity that employs the employees concerned.” As defined in IAS 19.7, “*Defined contribution plans* are post-employment benefit plans under which an entity pays fixed

contributions into a separate entity (a fund) and will have no legal or constructive obligation to pay further contributions if the fund does not hold sufficient assets to pay all employee benefits relating to employee service in the current and prior periods.” IAS 19.7 defines defined benefit plans residually: “*Defined benefit plans* are post-employment benefit plans other than defined contribution plans.” A distinguishing feature of defined benefit plans is that the liability for the defined benefits must be estimated on the basis of actuarial principles. Actuarial estimation is not required for a *defined contribution plan*, because the payouts under such plans vary directly with the amount of income generated by the plan's assets, rather than being a predetermined obligation (defined benefit). IAS 19.43 states: “Accounting for defined contribution plans is straightforward because the reporting entity's obligation for each period is determined by the amounts to be contributed for that period. Consequently, no actuarial assumptions are required to measure the obligation or the expense and there is no possibility of any actuarial gain or loss.” The accounting for defined contribution plans is equally as straightforward for the monetary and financial statistics.

<sup>28</sup>An exception to this classification is insurance policies. As defined in IAS 19.7, “*Plan assets* comprise (a) assets held by a long-term employee benefit fund; and (b) qualifying insurance policies.” The treatment of insurance policies held as plan assets is covered later in this section of this *Guide*.

<sup>29</sup>In an exceptional case, an employer may have organized more than one pension fund. Application of the accounting rule is directly extendable to multiple portfolios of pension plan assets.

<sup>30</sup>Funding of the pension fund may be provided by employee contributions, employer contributions, or both.

<sup>31</sup>Underfunding occurs when (a) the estimated value of the pension liabilities is greater than (b) the value the segregated assets; overfunding occurs when (a) is less than (b).

*aggregated to record a single category of stock and flow data.*<sup>32</sup>

**4.58** In contrast to the aggregated data in the monetary and financial statistics, separate data on pension plan assets are required for compiling the balance sheet in the International Financial Reporting Standards (IFRS) framework, as indicated in part (d) of IAS 19.54:

The amount recognised as a defined benefit liability shall be the net total of the following amounts:

- (a) the present value of the defined benefit obligation at the balance sheet date . . . ;<sup>[33]</sup>
- (b) plus any actuarial gains (less any actuarial losses) not recognised . . . ;
- (c) minus any past service cost not yet recognised . . . ;
- (d) minus the fair value at the balance sheet date of plan assets (if any) out of which the obligations are to be settled directly. . . .

The data presentation for the monetary and financial statistics differs from the presentation in the IFRS framework with respect to, in the former case, the amalgamation of the pension plan and own-funded assets and the presentation of the defined benefit liability and plan assets on a gross basis, rather than on the net basis specified in IAS 19.54(d).

**4.59** A separate category of pension funds is *unfunded pension schemes*, which are those for which the employer has not established a separate portfolio of reserve assets for meeting current and future pension claims. The employer may have earmarked some assets that can be sold or otherwise liquidated to meet the pension claims but, if so, has not segregated these assets from the employer's own funds. Given that pension fund assets are nonexistent or at least nonidentified, classification of the employ-

<sup>32</sup>For example, suppose that central government securities are included in the portfolio of pension plan assets, as well as in the portfolio of assets purchased with the employer's own funds. For the monetary statistics, central government securities would be recorded in the amount of the sum of the amounts of central government securities in both portfolios. All flow data would pertain to the transactions, valuation changes, and other changes in the volume of assets (OCVA) (if applicable) for the aggregated category. Similarly, suppose that land and building were included among the pension plan assets. These assets simply are combined with the other nonfinancial assets in the same nonfinancial asset category in the employers' accounts for the monetary and financial statistics. In the financial statistics, the aggregation rule applies to employers in non-financial sectors, as well as financial corporations.

<sup>33</sup>"The present value of the defined benefit obligation is the gross obligation, before deducting the fair value of any plan assets" (IAS 19.55).

er's assets for the monetary and financial statistics is straightforward; *all assets are to be classified by asset category—deposits, loans, securities other than shares, etc. (including nonfinancial assets)—disaggregated where applicable by national/foreign currency of denomination and by economic sector.*

**4.60** In this *Guide*, the category of *insurance technical reserves* as specified in *1993 SNA* is expanded to include the pension liabilities of unfunded, as well as funded, pension schemes. The *Guide* continues to adhere to the institutional delineation of the *insurance corporations and pension fund subsector* as defined in *1993 SNA*, ¶4.97:

This sub-sector consists of resident insurance corporations and quasi-corporations and autonomous pension funds. Insurance corporations consist of incorporated, mutual and other entities whose principal function is to provide life, accident, sickness, fire or other forms of insurance to individual institutional units or groups of units.

In accordance with this specification, the methodology in this *Guide* continues to define the subsector as those institutional units that specialize in insurance services and pension obligations. However, the category of *insurance technical reserves* is broadened to encompass the pension-related assets and liabilities of institutional units outside the insurance corporations and pension fund subsector—that is, employers with non-autonomous-funded or unfunded pension schemes—as well as the autonomous pension funds in the *insurance corporations and pension funds* subsector.<sup>34</sup> Insurance

<sup>34</sup>The broadening of the category of *insurance technical reserves* is a departure from the methodology of *1993 SNA*, but is consistent with anticipated revisions to appear in *1993 SNA Rev. 1* (forthcoming). The methodology in the *1993 SNA* excludes the liabilities for unfunded pension schemes from insurance technical reserves, using the following approach:

. . . An employer operating an unfunded scheme is regarded as making an imputed social contribution to the scheme on behalf of the employees. This contribution should be determined taking into account the composition of the labour force of the employer and the commitment to provide benefits in the future. In practice, however, it is usually set equal in value to the benefits payable in the period under consideration. The imputed contribution forms part of the compensation of employees and is also shown as being payable by the employees to the scheme together with any actual payments by the employees. However, it is not uncommon for unfunded schemes to be non-contributory for the employees. In these cases the payment by the employees to the scheme exactly matches the imputed contributions to them by the employer. (Annex IV, ¶37)

The *1993 SNA* recommends the use of memorandum items:

Unfunded occupational pension schemes . . . are by definition defined benefit schemes. . . . It is recommended that the present value to households of promises by these schemes to pay

technical reserves is a classification that is not used in the IFRSs. However, balance-sheet recognition of employer liabilities for unfunded, as well as funded, pension schemes is included in *IAS 19—Employee Benefits* (see ¶19.49). Pension plans may originate with employers in any institutional sector of the economy, including central, state, or local governments that have pension plans exclusively for government employees or other employee groups—that is, pension schemes that do not meet the qualifications of social security schemes.<sup>35</sup>

### Net Equity of Households in Life Insurance Reserves

**4.61** The *net equity of households in life insurance reserves* account is used to record the present value of the insurance corporation’s estimated (actuarial value of) liabilities for future claims by life insurance policyholders. As described in *1993 SNA*, ¶11.90, these liabilities are the counterparts to households’ asset holdings in the form of life insurance reserves:

Life insurance reserves consist of reserves against outstanding risks and reserves for with-profit insurance that add to the value on maturity of with-profit endowments or similar policies. Although held and managed by insurance enterprises, life insurance reserves are considered assets of the insured persons or households and not part of the net worth of the insurance enterprises. Life insurance reserves are collectively described as the net equity of households in life insurance reserves.

In the *MFSM* terminology, *net equity of households in life insurance reserves* refers to a liability account of an individual insurance corporation, as well as being used collectively.

**4.62** Some insurance contracts include a deposit component, a discretionary participation feature, or an embedded derivative(s).<sup>36</sup> This *Guide* recom-

future pension benefits be shown as a memorandum item . . . [accompanying] the balance sheets as assets of households. Liabilities of equivalent amount may also be shown as memorandum items for the employer sectors liable to pay these benefits. (*1993 SNA*, ¶13.88)

<sup>35</sup>State plans are organized by central, state, or local governmental units on behalf of a specific group of workers and, in accordance with *IAS 19.37–38*, are accounted for in the same way as multi-employer plans. State plans other than those exclusively for government employees are usually defined-contribution plans.

<sup>36</sup>For more on deposit components in insurance contracts, see *IFRS 4.BC42–BC54* and *IFRS 4.IG5*; on discretionary participation features, see *IFRS 4.BC154–BC165*; and on embedded derivatives, see *IFRS 4.7–9* and *IFRS 4. BC188–BC194*.

mends that, *for the monetary statistics, the bundling or unbundling (that is, separate classification) of the deposit component should be based on IFRS 4—Insurance Contract*, which states:

Some insurance contracts contain both an insurance component and a *deposit component*. In some cases, an insurer is required or permitted to *unbundle* those components:

- (a) unbundling is required if both the following conditions are met:
  - (i) the insurer can measure the deposit component (including any embedded surrender options) separately (that is, without considering the insurance component).
  - (ii) the insurer’s accounting policies do not otherwise require it to recognise all obligations and rights arising from the deposit component.
- (b) unbundling is permitted, but not required, if the insurer can measure the deposit component separately as in (a)(i) but its accounting policies require it to recognise all obligations and rights arising from the deposit component, regardless of the basis used to measure those rights and obligations.
- (c) unbundling is prohibited if an insurer cannot measure the deposit component separately as in (a)(i). (*IFRS 4.10*)

....

To unbundle a contract, an insurer shall:

- (a) apply this *IFRS* to the insurance component.
- (b) apply *IAS 39* to the deposit component. (*IFRS 4.12*)

**4.63** The discretionary participation feature constitutes a financial instrument that, like the guaranteed element in the insurance contract, can be viewed as a liability other than shares and other equity, or can be viewed as equity. *IFRS 4.34* stipulates that the issuer of the insurance contract may, but need not, recognize the guaranteed element separately from the discretionary participation feature. The general recommendation in this *Guide* is that *the discretionary participation feature should not be classified separately. However, if the discretionary participation feature has been classified as equity, in accordance with a requirement of the national financial reporting standards, the discretionary participation feature does not need to be recombined with the guaranteed element as a requirement of the monetary statistics.*

**4.64** The recommendation in this *Guide* is that *embedded derivatives not be separated from the host instrument, regardless of whether the embedded derivative is closely related or not closely related to the financial asset that serves as the host instru-*

ment. This recommendation applies to embedded derivatives in insurance contracts, as well as those in financial assets such as loans and securities. Further description of embedded derivatives is provided later in this chapter.

### Reinsurance

**4.65** The recommendation in this *Guide* is that *reinsurance assets not be netted against the insurance liabilities to which the reinsurance relates*.<sup>37</sup> This recommendation is consistent with IFRS 4.14, which states: “. . . an insurer . . . shall not offset . . . *reinsurance assets* against the related insurance liabilities. . . .” The amount of reinsurance assets should be separately identified (as a memorandum item) for use by regulators, supervisors, or other parties who wish to measure insurance liabilities on a net basis—that is, insurance liabilities *minus* reinsurance assets.

**4.66** The treatment of reinsurance in the *1993 SNA* is contained in Annex IV, ¶27–29, which states:

- “Insurance corporations undertake insurance in two different ways. The first of these is direct insurance with an institutional unit outside the insurance corporation and pension fund subsector. The second is reinsurance which is a form of insurance that involves only institutional units classified as insurance corporations and pension funds. . . .” (¶27)
- “Reinsurance transactions between resident insurance corporations should be consolidated; non-life direct insurance with non-life reinsurance corporations and life direct insurance with life reinsurance corporations. . . .” (¶ 28)
- “When reinsurance takes place between resident direct insurers and non-resident reinsurers or between non-resident direct insurers and resident reinsurers, a complete consolidation is inappropriate. . . . In principle, imports of reinsurance services are estimated as the balance of all flows occurring between resident direct insurers and non-resident reinsurers. . . . Exports of reinsurance services are similarly estimated as the balance of all flows between resident reinsurers and non-resident direct insurers. . . .” (¶29)

<sup>37</sup>The recommendation applies to reinsurance coverage for life and nonlife insurance, even though reinsurance is less prevalent for life insurance contracts.

**4.67** Though used in the compilation of the financial statistics, consolidation of reinsurance transactions between resident insurance corporations and consolidation of all flows between resident insurers/reinsurers and nonresident insurers/reinsurers is not applied in the monetary statistics, which contain the unconsolidated balance sheets and associated flows for all resident insurance and reinsurance corporations.

### Net Equity of Households in Pension Funds

**4.68** The *net equity of households in pension funds* account is used to record the present value of the estimated (actuarial value of) liabilities for the payment of current and future benefits to retirees or other beneficiaries. This subaccount of insurance technical reserves is the dominant liability account of an autonomous defined-benefit pension fund. It is also a major subaccount of the liabilities accounts of all other institutional units that have defined-benefit pension plans, either nonautonomous-funded pension plans or unfunded pension plans of financial corporations (including the central bank), public and other nonfinancial corporations, central government (excluding social security schemes), state and local governments, and nonprofit institutions serving households (NPISHs).

**4.69** *Net equity of households in pension funds* is measured on a gross basis, *not* the present value of estimated liabilities *less* plan assets. Measurement on a gross basis is not affected by the presence of pension insurance, whether or not the pension insurance contract is a *qualifying insurance policy* as defined in IAS 19.7:

A *qualifying insurance policy* is an insurance policy issued by an insurer that is not a related party . . . of the reporting entity, if the proceeds of the policy:

- (a) can be used only to pay or fund employee benefits under a defined benefits plan; and
- (b) are not available to the reporting entity’s own creditors (even in bankruptcy) and cannot be paid to the reporting entity, unless either:
  - (i) the proceeds represent surplus assets that are not needed for the policy to meet all the related employee benefit obligations; or
  - (ii) the proceeds are returned to the reporting entity to reimburse it for employee benefits already paid.

The recommendation in this *Guide* is to *treat a pension plan covered by a qualifying insurance policy as*



a defined contribution plan. This recommendation is in accordance with IAS 19.<sup>38</sup>

**4.70** *If an employer has a defined-benefit plan that is covered by insurance that does not constitute a qualifying insurance policy, it is recommended that the pension plan be treated as a defined-benefit plan in the monetary and financial statistics.* For example, transfer of a pension plan to one type of government-sponsored pension guarantee (that is, insurance) corporation occurs only if the employer having insurance coverage for a defined-benefit plan is in financial distress (usually, having already declared bankruptcy). If the pension fund (assets and liabilities) is transferred to the insurer, the pension liabilities are reduced to a fractional share of the post-employee benefits that were originally promised to the employees covered by the pension plan.<sup>39</sup> *It is recommended that potential plan assets that might arise as claims on such a pension insurer be recorded on an off-balance-sheet basis.*

### Prepayment of Insurance Premiums

**4.71** Prepayment of insurance premiums<sup>40</sup> is the only category of insurance technical reserves for which there are both asset and liability accounts in the sectoral balance sheet shown in Table 7.1 of the *MFSM*. The asset account is used to record the

<sup>38</sup>IAS 19.39 states: “An entity may pay insurance premiums to fund a post-employment benefit plan. The entity shall treat such a plan as a defined contribution plan unless the entity will have (either directly or indirectly through the plan) a legal or constructive obligation to either: (a) pay the employee benefits directly when they fall due; or (b) pay further amounts if the insurer does not pay all future employee benefits relating to employee service in the current and prior periods. If the entity retains such a legal or constructive obligation, the entity shall treat the plan as a defined benefit plan.”

<sup>39</sup>In this case, the employer does not meet the criterion of operating as a going concern, and the reduction in pension payments may abrogate the employer’s legal or constructive obligation for the pension fund. An employer’s obligations as a going concern are described in IAS 19.52–53: “An entity shall account not only for its legal obligations under the formal terms of a defined benefit plan, but also for any constructive obligation that arises from the entity’s informal practices. Informal practices give rise to a constructive obligation where the entity has no realistic alternative but to pay employee benefits. An example of a constructive obligation is where a change in the entity’s informal practices would cause unacceptable damage to its relationship with employees. . . . [I]t is usually difficult for an entity to cancel a plan if employees are to be retained.”

<sup>40</sup>These prepayments are similar in some respects to prepayments for some types of goods (for example, subscriptions to publications) and some types of noninsurance services (for example, dues for memberships in organizations). Prepayment of insurance premiums are classified separately, in *insurance technical reserves*, because of the specialized treatment of insurance corporations’ output in the national accounts statistics.

amount of an FC’s prepayments of premiums to insurance corporations for insurance policies that specify an ongoing relationship between the insurer and the policyholder—until such time when the insurance policy is terminated by the insuree or insurer. Excluded are prepayments of premiums for single-event and limited-duration insurance contracts such as title insurance associated with the acquisition of real property, flight insurance purchased by airline passengers, and insurance for domestic or international shipment of goods.<sup>41</sup>

**4.72** The category includes prepayments for both life insurance and nonlife insurance policies<sup>42</sup> that cover a wide variety of events such as accident, sickness, fire, and theft. The category also includes less common types of premium payments, including those for reinsurance, deposit insurance,<sup>43</sup> and pension insurance. The category includes prepayments that insurance corporations have made to other insurance corporations—for example, a life insurance corporation’s prepayments for fire insurance provided by a nonlife-insurance corporation.

**4.73** The liability account for prepayment of insurance premiums, within insurance technical reserves, is used to record the amount of an insurance corporation’s obligations for prepayments received from all resident and nonresident policyholders. Prepayments of insurance premiums do not need to be disaggregated by resident economic sector, but do need to be disaggregated into a separate category for resident insurers (that is, insurance corporations in the OFC subsector) and nonresident insurers. Similarly, prepayments in the asset account for insurance technical reserves need

<sup>41</sup>Owing to the specialized and short-term nature of these types of insurance, advance payments for insurance coverage are recorded as current expense (insuree) and current revenue (insurer), rather than treating the insurance services and associated payments by the insuree as being spread over time.

<sup>42</sup>In the 1993 *SNA* and *MFSM* methodology, *term life insurance* is treated as a form of nonlife insurance. According to the 1993 *SNA*, Annex IV, ¶1: “A policy that provides a benefit in the case of death within a given period but in no other circumstances, usually called term insurance, is regarded as non-life insurance because as with other non-life insurance, a claim is payable only if a specific contingency occurs and not otherwise. In practice, because of the way in which insurance corporations keep their accounts, it may not always be possible to separate term insurance from other life insurance. In these circumstances, term insurance may have to be treated in the same way as life insurance for purely practical reasons.”

<sup>43</sup>A deposit insurance premium usually is calculated as a specified percentage of the amount of the outstanding balances in insured deposit accounts.

to be disaggregated by prepayments made to resident and nonresident insurers, respectively. The disaggregation is needed to facilitate the compilation of total claims on and liabilities to economic sectors and to nonresidents, as shown in the consolidated surveys compiled from the sectoral balance sheets.

**4.74** The *prepayment of insurance premiums* account is used to record prepayments of *actual payments* of premiums. In the framework of *1993 SNA*, technical reserve assets of insurance corporations are treated as assets of the policyholders, and the investment income from these assets is treated as if paid by the insurance corporations to policyholders and paid back to the insurance corporations in the form of premium supplements. *1993 SNA*, ¶7.124 states:

The income payable by insurance enterprises to policyholders in this way is described as property income attributed to insurance policyholders. However, this income is retained by the insurance enterprises in practice. It is therefore treated as being paid back to the insurance enterprises in the form of premium supplements that are additional to actual premiums payable under the terms of the insurance policies. These premium supplements on non-life insurance policies and on life insurance policies taken out under social insurance schemes are recorded together with the actual premiums in the secondary distribution of income accounts of the units concerned. . . .

The *prepayment of insurance premiums* account does not contain a component that would be described as prepayment of premium supplements.

### Reserves Against Outstanding Claims

**4.75** Liabilities that life- and nonlife-insurance corporations incur as *reserves against outstanding claims* are described in the *1993 SNA*, ¶11.98:

Reserves against outstanding claims are reserves that insurance enterprises hold in order to cover the amounts they expect to pay out in respect of claims that are not yet settled or claims that may be disputed. Valid claims accepted by insurance enterprises are considered due for payment when the eventuality or accident that gives rise to the claim occurs—however long it takes to settle disputed claims. Reserves against outstanding claims are therefore considered to be assets of the beneficiaries and liabilities of the insurance enterprises.

**4.76** In the framework of the IFRSs, disputed insurance claims are a type of liability that meets the definition of a provision, which in *IAS 37—Provisions*,

*Contingent Liabilities and Contingent Assets* is defined as “a liability of uncertain timing or amount” (*IAS 37.10*). *The present value of any expected payouts from future settlements of disputed claims should be included in the insurance corporation’s reserves against outstanding claims (rather than in provisions—liabilities) within other accounts payable—other.*<sup>44</sup>

### Financial Derivatives

*A financial derivatives contract is a financial instrument that is linked to a specific financial instrument, indicator, or commodity, and through which specific financial risks (such as interest rate risk, currency, equity and commodity price risk, credit risk, etc.) can be traded in their own right in financial markets. (MFSM, ¶176)*

The two broad types of financial derivatives are forward-type contracts and option contracts. In a *forward-type contract*, which is unconditional, two counterparties agree to exchange a specified quantity of an underlying item (real or financial) at an agreed-upon price (the *strike price*) on a specified date. In an *option contract*, the purchaser acquires from the seller a right to buy (or sell, depending on whether the option is a call or a put) a specified underlying item at a strike price on or before a specified date. (*MFSM*, ¶177)

### Financial Derivative Markets

**4.77** The financial markets have spawned a large assortment of financial derivatives in the broad categories of *forward-type contracts* and *options contracts*. Forward-type contracts are divided into *forward contracts*, which are traded in over-the-counter markets, and *futures contracts*, which are traded on organized exchanges. No analogous dichotomy is applied to the options markets. *Options contracts* refers to both exchange-traded and over-the-counter options. A number of standard types of forward-type contracts and options contracts are shown in Table 4.3 and Table 4.4, respectively. Examples of *exotic options*—those with relatively atypical contract terms—are described in Table 4.5.

**4.78** Examples of credit derivatives are shown in Table 4.6, and some relatively new types of contracts—

<sup>44</sup>In the methodology of the *1993 SNA* and the financial statistics, “liabilities of uncertain timing and amount” are treated as contingent liabilities (off-balance-sheet items). The treatment of these *provisions* in the monetary statistics is covered in the last section of this chapter.

**Table 4.3. Standard Types<sup>1</sup> of Forward and Futures Contracts**

Definitions	Underlying Instrument (Main Price-Settlement Variable)
<p><i>Forward contract.</i> An over-the-counter agreement to buy or sell an asset for a predetermined delivery price at a specified future time.</p> <p><i>Futures contract.</i> An exchange-traded agreement to buy or sell an asset for a predetermined delivery price at a specified future time.</p> <p><i>Swap contract.</i> An over-the-counter agreement between two parties to exchange future cash flows.</p> <ul style="list-style-type: none"> <li>• <i>Interest rate swap.</i> Fixed-rate payments swapped for floating-rate payments.</li> <li>• <i>Currency swap.</i> Payments in one currency swapped for payments in another currency.</li> <li>• <i>Cross-currency interest rate swaps.</i> Fixed-rate payments in one currency swapped for floating-rate payments in another currency.</li> <li>• <i>Equity swap.</i> One party's swapped payments are based on the performance of a stock price or stock index. The other party's swapped payments can be based on a fixed or floating rate, another stock price, or a stock index.</li> <li>• <i>Forward-rate agreement (FRA).</i> An over-the-counter obligation that applies a predetermined interest rate to a notional principal amount over a specified future time period. An FRA is equivalent to an agreement in which a predetermined fixed-rate payment is swapped for a floating-rate payment.</li> </ul>	<p><i>Future and/or forward contracts</i></p> <ul style="list-style-type: none"> <li>• Currency (exchange rate)</li> <li>• Equity shares in a corporation or corporations (individual share price or stock price index)</li> <li>• Securities other than shares (interest rate)</li> <li>• Gold (gold price)</li> <li>• Other commodity or commodity basket (individual commodity price or commodity price index)</li> <li>• Swap contract (interest rate). A forward agreement to enter into a swap contract at a future time—called a <i>deferred swap</i> or <i>forward swap</i>.</li> </ul> <ul style="list-style-type: none"> <li>• Notional principal (interest rate)</li> <li>• Notional principal (exchange rate)</li> <li>• Notional principal (interest rate and exchange rate)</li> <li>• Notional principal (stock prices, stock price and interest rate, etc.)</li> <li>• Notional principal (interest rate)</li> </ul>

<sup>1</sup>Excluding credit derivatives; see Table 4.6.

energy, weather, and insurance derivatives—are described in Table 4.7. Valuation of financial derivatives and the accounting for stocks and flows from originating, holding, trading, and settling the more common types of contracts are covered in Chapter 5.

**4.79** The volume of financial derivatives trading in the over-the-counter markets is much larger than the volume on the futures and options exchanges, and the typical transaction in the over-the-counter market is also larger. The overall volume and average size of transactions in the over-the-counter markets are boosted by the inclusion of large volumes of forward contracts in the form of interest-rate and currency swaps.

**4.80** This *Guide* recommends that, if the counterparty defaults on the performance of an over-the-counter

contract, *the financial derivative should be reclassified as a loan until the contract is written off.* The recommendation would not apply to financial derivatives that are traded on the organized exchanges. The exchanges incur the direct losses from contract non-performance,<sup>45</sup> and settle on the settlement date, the same as if performance had occurred.

### Forward-Type Contracts (Forwards, Futures, and Swap Agreements)

**4.81** Forward-type contracts include *futures contracts*—those that are traded on organized exchanges—and *forward contracts*, which are bought

<sup>45</sup>The exchange members incur indirect costs through their contributions to a fund that the exchange draws upon to cover nonperformance of contracts.

**Table 4.4. Standard Types of Options Contracts**

Definitions	Options contract
<p><i>Call and put options</i></p> <ul style="list-style-type: none"> <li>• <i>Call option.</i> A contract giving the holder the right to buy an asset at a stated price (that is, the strike price) on or before a certain date.</li> <li>• <i>Put option.</i> A contract giving the holder the right to sell an asset at a stated price (that is, the strike price) on or before a certain date.</li> </ul> <p><i>American and European options</i></p> <ul style="list-style-type: none"> <li>• <i>American call or put option.</i> Right to exercise at any time during the life of the option.</li> <li>• <i>European call or put option.</i> Right to exercise only at expiration.</li> </ul> <p><i>In-the-money and out-of-the-money options</i></p> <ul style="list-style-type: none"> <li>• <i>In-the-money call (put) option.</i> Strike price above (below) the market price of the underlying asset.</li> <li>• <i>Out-of-the-money call (put) option.</i> Strike price below (above) the market price of the asset.</li> </ul>	<p><i>Options contract (strike price variable)</i></p> <ul style="list-style-type: none"> <li>• <i>Stock option</i><sup>1</sup> (market price of a corporation's equity shares)</li> <li>• <i>Index option</i> (level of a stock price index)</li> <li>• <i>Bond option</i> (market price of corporate or government securities)</li> <li>• <i>Foreign-currency option</i> (market exchange rate)</li> <li>• <i>Option on a futures contract, called a futures option</i> (market price of futures contract)</li> <li>• <i>Option on an interest-rate swap contract—also called a swap option, or swaption</i> (fixed interest-rate in the swap contract; strike price can also be stated in terms of the amount of notional principal)</li> </ul>
<p><sup>1</sup>Includes long-term equity anticipation securities (LEAPS).</p>	

and sold in over-the-counter trading conducted through computer-linked networks of dealers or by telephone between FCs or between an FC and a non-financial corporate client (see Table 4.3).

**4.82** Forward contracts are not standardized, whereas futures contracts have standard terms as specified by the futures exchanges. Significant differences between forward and futures contracts include:

- *Buyer, seller, and the clearinghouse.* For either a forward contract or a futures contract, the parties that acquire the long position and short position are called the *buyer* and *seller*, respectively. For a forward contract, a buyer and seller directly negotiate the contract and hold the long and short positions with each other. For futures contracts, a clearinghouse (established by the exchange) is interposed between the buyer and seller. The clearinghouse is the counterparty to all futures contracts, acting as the seller of all contracts for long positions and the buyer of all contracts for short positions. The position of the clearinghouse nets to zero. All risk of nonperformance (that is, contract default) is borne by the clearinghouse, which is obligated to perform on its side of each contract.
- *Delivery.* A forward contract normally contains an exact delivery date, whereas a futures con-

tract usually specifies an entire month or several days within a month (as specified by the futures exchange) when delivery can be made.

- *Settlement.* Forward contracts normally are settled by delivery of the underlying assets or by cash settlements at the maturity of the contracts, whereas futures contracts are usually closed out prior to maturity. A long or short position in a futures contract is easily liquidated by engaging in a *reversing trade*—simply by acquiring an offsetting short or long position in the futures contract. The futures exchange nets out the original (long or short) position and the reversing (short or long) position. A zero net position with the clearinghouse results, and the need to settle the original or the reversing positions is eliminated.
- *Accumulation of value.* Both forward and futures contracts have zero values at inception. For a forward contract, day-to-day gains or losses in the value of the contract are allowed to accrue until the final settlement of the contract. For a futures contract, the clearinghouse of the futures exchange requires *daily marking to market* (that is, revaluation of the futures contract on each day that the exchange is open) and *daily settlement*—realization rather than accrual—of any daily gain or loss on the contract. After the daily settlement, the futures contract again has a zero value.

**Table 4.5. “Exotic” Options Contracts: Examples<sup>1</sup>**
**Definitions**
*Nonstandard American options<sup>2</sup>*

- Early exercise restricted to specific dates, or to only part of the life of the option.<sup>3</sup>
- The strike price varies over the life of the option.

*Forward start option.* An option that starts at some future date.<sup>3</sup>

*Compound option.* An option on an option—that is, a call option on a call option, a put option on a call option, a call option on a put option, or a put option on a put option.

*Chooser option (also called an as you like it option).*

An option that, after a specified time, the holder can designate as either a call or a put option.

*Barrier option.* If the underlying asset price reaches a specified level, the option ceases to exist (*knock-out option*) or comes into existence (*knock-in option*).

*Binary option.* An option with a discontinuous payoff—for example, an in-the-money call option that pays a fixed amount, regardless of the differential between the current price and strike price of the asset.

*Lookback option.* An option for which the payoff depends on the maximum or minimum price of the asset during the life of the option.

*Asian option.* An option for which the payoff depends on the average price of the asset during a predetermined averaging period within the life of the asset.

<sup>1</sup>Characteristics of these and other exotic options, along with valuation methods, are covered in Hull (2003).

<sup>2</sup>Some warrants issued by corporations on their own stock have these features.

<sup>3</sup>Executive stock options often have this feature; right of exercise starts when the options are vested.

side of the market and the maximum number of contracts that can be exercised within a given period. Options exchanges usually make use of market-makers—individuals who are willing to quote both a bid and an offer price (that is, asked price) for an options contract. The exchange sets an upper limit on the *bid-offer spread*—that is, the price differential between the market maker’s buy and sell quotations. Strike prices for exchange-traded stock options are not normally adjusted for *cash dividends*, but the exchange makes strike-price adjustments for *stock splits*, *stock dividends*, and *rights issues* (that is, contractual rights for existing shareholders to purchase new-issue corporate shares at a specified price). In competition with the large over-the-counter options market, options exchanges have begun to offer some *flex options*—that is, contracts with somewhat nonstandard terms. Although all nonstandard contracts can be called *exotic options* (see Table 4.5), some options contracts are more exotic than others. Flex options are in the relatively less exotic category.

**4.85** An *American option* can be exercised at any time during the life of the option, whereas a *European option* can be exercised only at expiration of the option contract. The American and European designations pertain only to exercise timing, not to the location in which the options contracts are written, that is, both American and European options are originated and traded in the U.S. markets. Even though an American option can be exercised earlier, most in-the-money American call options are exercised at maturity. Earlier exercise of an in-the-money American call option on a non-dividend-paying stock may not be economically rational. Prior to maturity, the call option holder obtains the same financial rewards (but not the same downside risk) that would arise from ownership of the shares, while postponing the cash outlay for the share purchase until the end of the options contract.

**4.86** The same incentive for postponing the exercise of an American put option does not exist. A put option that is deeply in the money would be exercised early. The cash inflow from exercising the put option (that is, from selling the underlying asset) can be profitably reinvested during the interim period before the put option would expire.

**4.87** Investors often can purchase equity shares by *buying on margin*—that is, by maintaining a *margin account* for the part of the share purchase price

## Options Contracts

**4.83** Options contracts (Table 4.4) are simply referred to as *exchange-traded options* and *over-the-counter options*. No terminology analogous to the forwards/futures dichotomy is used for options.

**4.84** The options exchange specifies the standard terms for exchange-traded options. The exchange sets the *size* of a single contract (for example, one stock option contract equals 100 shares of the stock) and establishes *position limits* and *exercise limits*—the maximum number of option contracts that an investor or investor group can hold on one

**Table 4.6. Credit Derivatives: Standard Types Classified as Financial Derivatives<sup>1</sup>**

Definition	Underlying Instrument (Price and Credit Variable)
<p><i>Swap or options contract</i></p> <ul style="list-style-type: none"> <li>• <i>Total return swap.</i> Fixed or floating-rate payments swapped for payments in the amount of the total return on securities such as bonds of a private issuer, where the total return includes both interest payments and capital gains or losses.</li> <li>• <i>Credit-spread call or put option.</i> Payoff dependent upon whether a specific interest-rate spread—for example, the rate over the London interbank offered rate (LIBOR) or over a default-risk-free government security rate—is above (call option) or below (put option) a “strike” rate spread.</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Reference obligation</i>—that is, a specific bond (interest rate and bond price that may be influenced by a change in credit risk)</li> <li>• <i>Reference obligation</i> (interest rate that may be influenced by a change in credit risk)</li> </ul>

<sup>1</sup>Some types of credit derivatives are classified as insurance contracts.

paid in cash (based on initial and maintenance margins, stated as percentages of the market value of the shares), and by borrowing the remainder of the purchase price of the shares. Options must be paid for in full when purchased—that is, cannot be bought on margin (that is, on credit)—because of the high degree of leverage inherent in the options contracts themselves. *Options writers* are required to maintain funds in margin accounts to cover the risk that they may default on options contracts that are exercised. However, no margin account is required from the writers of *covered call options*—that is, call options written by investors who already own (outright rather than on margin) the assets to be delivered if the call options are exercised.

**4.88** *Employee stock options* are call options that are issued as a form of compensation and as incentives for corporate employees to perform their duties in the best interests of the corporation’s shareholders. For many corporations, employee stock options are called *executive stock options*, because they are provided only to senior managers of the corporation. Employee stock options are somewhat similar to other long-term call options (long-term equity anticipation securities—LEAPS—of up to three-year maturity). In other respects, executive stock options are similar to warrants that corporations issue on their own shares. The life of an employee stock option usually does not start until after a vestment period has elapsed. The recipient of employee stock options may have the right to exercise a vested stock option as of a particular date or at any time prior to, or shortly after, resigning or retiring from the corpo-

ration. Exercise of the stock options may result in an increase in the number of corporate shares outstanding, depending on whether the exercise of the options is honored by a corporation by (1) issuing new shares, (2) drawing on own share holdings (that is, treasury stock), or (3) purchasing its own shares in the stock market for delivery to the option holder.

**4.89** This *Guide* recommends *compilation of separate data on employee stock options within the category of financial derivatives*.<sup>46</sup> The data on employee stock options should be available to compilers of the monetary and financial statistics, either on request or as a memorandum item in the standard format for data reporting. Employee stock options have some characteristics in common with other call options on equity—in particular, the right to exercise at a strike price and at the holder’s prerogative after the options are vested. In other respects, executive stock options are distinguished from other call options on shares.

**4.90** Regular call options are sold to investors who *provide remuneration* (that is, payment of option premiums) to call option writers, whereas employee stock options are provided to employees *as remuneration* for services performed and in lieu of additional salary, cash bonuses, or other employee inducements. In the statistical methodology, financial derivatives are specified as tradable and, in

<sup>46</sup>In the future revision of the 1993 SNA, the category of *financial derivatives* is likely to be changed to *financial derivatives and employee stock options*, and separate subcategories for *financial derivatives* and *executive stock options* are likely to be introduced.

**Table 4.7. Energy, Weather, and Insurance Derivatives: Examples**

Definition	Underlying Instrument (Main Price or Event Variable)
<b>Energy derivatives</b> <ul style="list-style-type: none"> <li>• <i>Crude oil or natural gas.</i> Forward, future, swap, and option contracts for crude oil or natural gas</li> <li>• <i>Electricity.</i> Forward, future, swap, and option contracts</li> </ul>	<ul style="list-style-type: none"> <li>• Actual quantity or notional amount, depending on whether the contract is to be settled in cash or through delivery (price of crude oil or natural gas)</li> <li>• Kilowatt hours of electricity (price per kilowatt)</li> </ul>
<b>Weather derivatives<sup>1</sup></b> <ul style="list-style-type: none"> <li>• <i>Temperature.</i> Forward, future, and option contracts</li> <li>• <i>Rainfall or snowfall.</i> Forward and option contracts</li> </ul>	<ul style="list-style-type: none"> <li>• Notional amount (cumulative HDD<sup>2</sup> or CDD<sup>3</sup> during a period)</li> <li>• Notional amount (rainfall or snowfall during a period)</li> </ul>
<b>Insurance derivatives</b> <ul style="list-style-type: none"> <li>• <i>Various over-the-counter alternatives to reinsurance</i></li> <li>• <i>Exchange-traded insurance futures contracts</i></li> </ul> <p><i>Example: CAT bond (that is, “catastrophe” bond). Purchase of bonds with above-market yields provided in exchange for bond purchaser’s provision of a reinsurance contract.</i></p>	<p>Notional or actual amounts, depending on the type of contract (various event variables)</p> <p>Bond principal and/or interest (occurrence of loss from earthquake, hurricane, or other event covered by the reinsurance contract)</p>

<sup>1</sup>This Guide uses the IFRS criterion to distinguish weather derivatives from weather insurance. IFRS 4.BC60 states: “The IFRS distinguishes an insurance contract (in which an adverse effect on the policyholder is a contractual precondition for payment) from other instruments, such as derivatives and weather derivatives (in which an adverse effect is not a contractual precondition for payment, although the counterparty may, in fact, use the instrument to hedge an existing exposure).” (See also IFRS 4.BC55–BC59.)

<sup>2</sup>Heating degree day (HDD) is a measure of energy usage required for heating during a day:  $HDD = \max(0, 65 - A)$ , where A denotes the average of the highest and lowest daily temperatures at a specified weather station.

<sup>3</sup>Cooling degree day (CDD) is a measure of energy usage required for cooling during a day:  $CDD = \max(0, A - 65)$ .

particular, as instruments for risk trading between the parties to the contracts. Even if employee stock options are tradable (which is uncommon), origination of the options is not motivated by the desire to trade risk, but rather as a means of compensating employees, usually on a deferred basis and without a direct cash outlay by the corporation. Given their remunerative purpose, employee stock options should be treated as a separate subcategory within financial derivatives.

### Credit, Energy, Weather, and Insurance Derivatives

**4.91** Credit derivatives are financial instruments that are designed for the trading of credit risk—that is, the risk that bonds, other securities, or loans will decline in value because of deterioration in the credit rating of the debt issuer or, in more dire circumstances, because of default on the debt obligations. Credit derivatives (Table 4.6) take the form of swap contracts, call options, and put options.

**4.92** *Some credit derivatives are similar to other types of swaps and options contracts and therefore*

*are classified as financial derivatives (see Table 4.6). Other credit derivatives—in particular, credit default swaps—are more appropriately viewed as a form of insurance and should be classified as insurance contracts. In a credit default swap agreement, one party provides fixed payments at periodic intervals in exchange for the right to deliver (put) securities or a loan at a specified price, if default on the obligation occurs. A basket default credit swap agreement specifies a portfolio of debt obligations for which the right to delivery applies to each obligation for which default occurs. The periodic payments for a credit default swap are equivalent to insurance premiums, and the payoff in the event of a credit default is equivalent to an insurance settlement.*

**4.93** The distinction between a financial derivative and an insurance contract is sometimes blurred. Guidance cannot be provided for classification of each type of contract, given the variety of contracts created since the advent of credit and insurance derivatives. In this Guide, the general principle is that *a contract should be classified as an insurance policy (1) if periodic payments under the contract are indistinguishable from insurance premiums, (2) if*

payoff depends on the occurrence of an event such as a credit default or an act of nature (rather than a change in price or interest rate for the underlying asset), (3) if the potential payoff is indistinguishable from an insurance claim, and (4) if the contract does not contain other swap- or option-type provisions.<sup>47</sup>

## Other Accounts Receivable/Payable

*Other accounts receivable/payable include (1) trade credit and advances and (2) other. . . Trade credit and advances do not include loans to finance trade credit, which are classified under the category of loans. The other category is used to record all items that need to be reviewed for classification elsewhere, as well as accrued taxes and accrued expenses such as rent, wages, and salaries. The other category also includes items such as deferred income and provisions for loan losses and other purposes. (MFSM, ¶179)*

### Trade Credit and Advances

**4.94** Trade credit and advances are claims (or obligations) that arise from the sale (or purchase) of goods and services for which payment is not yet due. For FCs, trade-credit receivables usually are associated with their sale of financial services, given that FCs seldom are vendors of goods. Trade-credit payables of FCs arise from their acquisition of goods and services provided by nonfinancial corporations, as well as from their purchases of financial services from FCs.

**4.95** Excluded from the category of *trade credit and advances* are:

- *Claims or obligations arising from transactions in financial assets.* A transaction is recorded at the time of change of ownership, which may precede settlement (payment) for the financial asset by several days or longer. For the recipient of the future payment, the claim is recorded in the settlement accounts within *other accounts receivable—other*. The provider of the future payment records the obligation in the settlement accounts within *other accounts payable—other*.

<sup>47</sup>The distinction may also be blurred between a credit insurance contract and a third-party credit guarantee—a contingent liability classified as an off-balance-sheet item. If premium payments are made in exchange for the credit guarantee, the contract should be classified as an insurance policy. If no transactions are involved in the absence of a credit-default claim, the guarantee is classified as a contingent liability.

- *Interest-bearing claims/obligations.* In this *Guide*, trade credit and advances are defined to exclude all interest-bearing claims or obligations. *If explicitly interest-bearing, the claim or obligation should be classified as a loan. However, classification as trade credit is appropriate for claims/obligations for which early-payment discounts can be applied.* Payment terms for some purchases of goods and services are sometimes viewed as containing implicit interest rates, based on cash discounts that are provided for prompt payment. In this *Guide*, the cash discount is viewed as a reduction in the sale price of the good or service, rather than as implicit interest that is avoided by early payment.<sup>48</sup>
- *Trade-credit arrears.* If payment is overdue, the trade-credit provider may extend the payment period as a courtesy to the customer, or may arrange for the trade credit to be converted to an interest-bearing loan. In other circumstances, the trade-credit provider may judge that the trade credit is unlikely to be repaid. Uncollectible trade credit is treated as equivalent to uncollectible principal on a loan. In this *Guide*, it is recommended that *trade-credit claims that appear to be uncollectible should be reclassified as loans.* After reclassification, the loan (formerly, trade credit) can be treated in the same manner as other impaired loans with respect to provision for loan losses, loan write-off, and expected loan losses (see Chapter 5).
- *Prepayment of insurance premiums.* The *advances* subcategory within *trade credit and advances* applies to advance payments for work in progress and prepayments for goods and services, except for the prepayment of policy premiums for insurance services. The classification of these prepayments as *insurance technical reserves*, rather than as trade credit, is an element of the 1993 SNA methodology that facilitates the data compilation for the insurance corporation subsector. Prepayments of insurance premiums are a relatively minor category of financial assets for the FCs that are policyholders,

<sup>48</sup>The trade-credit classification applies even though the implicit interest rate may be substantial. For example, payment terms of “2/10/net 30” means a 2 percent discount of the invoice amount, if payment is made within the 10-day discount period; otherwise, the full invoice amount is to be paid within 30 days. By forgoing the discount, the payee obtains a 20-day use of funds at a cost of 2 percent of the invoice amount. The implicit interest rate (uncompounded) is 36.5 percent a year—that is, the 2 percent discount multiplied by (365/20), the number of 20-day periods in a year. For “1/10/net 30,” the implicit interest rate is 18.25 percent.



but are significant liabilities of the insurance corporations that receive the prepayments.

### Other Accounts Receivable/Payable—Other

**4.96** The *MFSM* recommended that *other accounts receivable/payable—other* be disaggregated only into resident and nonresident categories. In this *Guide*, the *MFSM* methodology is revised, and further disaggregation of some accounts within the resident category of *other accounts receivable/payable—other* is now recommended. Further disaggregation by type of financial instrument and/or economic sector of debtor/creditor is recommended for some accounts.

**4.97** Various subcategories of accounts within *other accounts receivable/payable—other* are described in this chapter. Some subcategories are combined in compiling the data that are to be reported to the compilers of monetary and financial statistics, as described in Chapter 7 of this *Guide*.

**4.98** The major subcategories of *other accounts receivable—other* are:

- Dividends receivable;
- Settlement accounts (disaggregated by economic sector);
- Items in the process of collection;
- IMF quota subscription (applicable only to the central bank); and
- Miscellaneous asset items.

**4.99** *Dividends receivable* on corporate shares arise from the recording of dividends when the dividends are declared, rather than later when the dividends are paid.<sup>49</sup> When notified that a dividend has been declared, the shareholder records the amount of the dividend receivable.

**4.100** *Settlement accounts* are used to account for differences in the time of recording of purchases or sales of financial assets on the *trade dates* when changes of ownership occur, and the subsequent payments for the financial assets on the *settlement dates*. Suppose an FC sells securities and receives payment from the securities purchaser on the trade date. The FC records the reduction in its securities hold-

ings and, at the same time, records the corresponding increase in its deposit holdings or reduction in its deposit liabilities (if the securities purchaser made payment from a deposit account at the FC). No entry in a settlement account would be needed. Alternatively, suppose that the FC is to deliver the securities and is to receive payment on a settlement date that is the second day after the trade date. On the trade date, the FC records the reduction in its securities holdings and a corresponding increase in the settlement account within *other accounts receivable—other*. On the settlement date, the FC records the payment received from the securities purchaser and a corresponding reduction in the settlement account.

**4.101** The same procedure applies when the FC is the purchaser of securities, except the settlement account is a payable. On the trade date, the FC records the increase in its securities holdings and a corresponding increase in the settlement account within *other accounts payable—other*. On the settlement date, the FC records the payment for the securities and a corresponding reduction in the settlement account in *other accounts payable—other*.

**4.102** The settlement accounts within *other accounts receivable—other* are disaggregated by resident/nonresident category, and the resident category is further disaggregated to show the separate settlement claims on the central bank, ODCs, OFCs, central government, state and local government, public nonfinancial corporations, other nonfinancial corporations, and other resident sectors. If the stock and flow data for settlements accounts are small in comparison with those for major categories of financial assets and liabilities, data disaggregated by economic sector may not have economic significance, and disaggregation of the settlement account may be deemed unnecessary.

Checks or other types of transferable items are posted directly to depositors' accounts, but these are unavailable for use until after the transferable items have been cleared through the central bank or other type of clearing organization. Such unavailable deposits should be recorded under *items in the process of collection* within deposits excluded from broad money. Exclusion of such deposits from transferable deposits avoids their being double counted in the monetary aggregates, given that these deposits continue to be included in the transferable deposits of the DCs on which the items were drawn until the items are collected from these DCs. (*MFSM*, ¶306)

<sup>49</sup>This accounting treatment, as recommended in the *MFSM*, accords with IAS 18.30 (c), which states that "dividends shall be recognised when the shareholder's right to receive payment is established."

**4.103** *Items in the process of collection* are created when a DC receives a check or other transferable item from a customer. The usual procedure is to record the item in the customer's deposit account, along with a contra-entry in *items in the process of collection* within *other accounts receivable—other*. The entry in *items in the process of collection* is reversed after the item has been presented through the clearing system and has been paid by the DC (resident or nonresident) on which it was drawn. The posting to *items in the process of collection* in *other accounts receivable—other* is needed unless the item is settled on the day of deposit,<sup>50</sup> or has been recorded on an off-balance-sheet basis.<sup>51</sup>

**4.104** The *MFSM* and this *Guide* recommend that *the item deposited in the customer's account be classified in deposits excluded from broad money, until the proceeds from the collected item have been made available to the depositor on an unrestricted basis*. Using this approach, double counting in broad money is avoided. The amount of the item is still included in the payer's deposit account and, therefore, in the broad-money liabilities of the DC on which the item was written.<sup>52</sup> In effect, the recommended approach treats the item *as if* it had not yet been written. In compiling the data for *other accounts receivable—other*, the ODCs' data for items in the process of collection need to be divided into separate categories only for resident and nonresident payees.

**4.105** An alternative approach would be to treat items in the process of collection *as if* the items already had been collected—that is, *as if* the items had been paid by the DCs on which the items were written. Using this approach, the payee's deposit of the item would be posted to *deposits included in broad money* (even if the payee is not allowed to withdraw the funds from the deposit account until after the item has been settled). To adjust for double counting of deposits in broad money, the monetary statistics compilers would deduct the items from the deposit liabilities of the DCs on which the items were written. To make the adjustments, all items in the process of collection

<sup>50</sup>For example, the item may have been written on the DC that received it, because the payee and payer are customers of the same DC. The propensity for same-day settlement increases over time as countries adopt electronic clearing of collectible items.

<sup>51</sup>Off-balance-sheet recording usually applies only to special items or atypical circumstances. For a few countries, such recording may be a more general practice.

<sup>52</sup>The DC discovers that the item is outstanding only when it is presented for payment through the clearing system.

would need to be disaggregated by both economic sector of the payee and economic sector of the payer. Because of the extensive disaggregation, detail data on items in the process of collection would need to be provided to the monetary statistics compilers on a supplementary basis.

*Central bank float*, which is shown as a memorandum item on the sectoral balance sheet of the central bank, is deducted from the *transferable deposits* component of *broad money*, with a contra-entry in *other liabilities*. Central bank float represents the amount that the central bank has provided to DCs that have sent checks or other items for collection, **even though the central bank has not yet collected from the DC on which the checks or other items were written.** (*MFSM*, ¶399)

[Note: The boldface text does not appear in the *MFSM* and has been added for clarification.]

**4.106** A special category of *items in the process of collection* arises if a central bank provides advance availability of funds to DCs that have sent items to the central bank for collection. In the absence of data adjustment, broad money would be overstated by the amount of *central bank float*—that is, by the amount of the central bank funds provided in advance of the central bank's collection of funds from the DCs on which the items were written. Central bank float need not be shown as a separate category within *other accounts receivable—other* in the sectoral balance sheet of the central bank. As the *MFSM* indicates, *central bank float* needs to be reported as a memorandum item to accompany the sectoral balance sheet of the central bank. Adjustment for central bank float can be made as part of the compilation of the *Depository Corporations Survey (DCS)*, as described in Chapter 7 of this *Guide*.

**4.107** *IMF quota subscription* is recorded as an asset on the balance sheet of the central bank of the member country. Quota is determined upon admission to IMF membership and is increased periodically under the IMF's General Quota Reviews. Separate data on the IMF quota subscription should be shown under the nonresident category of *other accounts receivable—other* in the sectoral balance sheet of the central bank.

**4.108** *Miscellaneous items* are defined in this *Guide* as all accounts not elsewhere classified in the FC's balance sheet. *Miscellaneous asset items* and *miscel-*

aneous liability items are included in *other accounts receivable—other* and *other accounts payable—other*, respectively. In a national accounting system, some accounts in the miscellaneous categories may be known by names that are different than the descriptors used in this *Guide*.

**4.109** In exceptional circumstances, a relatively large transaction may be recorded in *miscellaneous items*. If so, the FC should provide supplementary information on the nature and amount of the transaction, as well as identification of the sector of the transactor (nonresident or, if resident, identified by economic sector).

**4.110** Major types of *miscellaneous asset items* often include:<sup>53</sup>

- *Suspense accounts*. These accounts are used for temporary recording of (1) claims for which proper classification has not yet been determined, (2) claims for which verifications, notifications, instructions, or other documentations are required for completing the transactions, and (3) claims that are under litigation or otherwise in dispute. *It is recommended that an FC clear the items from the suspense accounts as soon as possible.*
- *Deferred tax assets*. This category arises from the accounting for income taxes.<sup>54</sup>
- *Prepayments of taxes, import duties, rent, wages, or other operating expenses.*

**4.111** The major subcategories of *other accounts payable—other* are:

- Dividends payable;
- Settlement accounts;
- Provisions for losses on impaired financial assets;
- Accumulated depreciation and accumulated impairment losses on nonfinancial assets; and
- Miscellaneous liability items.

**4.112** *Dividends payable* arise from the recording of dividends on the FC's shares at the time when the dividends are declared, rather than when paid.

**4.113** *Settlements accounts* within *other accounts payable—other* show an FC's obligations for payments (on future settlement dates) for financial assets

<sup>53</sup>This *Guide* does not provide an exhaustive list of the miscellaneous asset and liability items in national accounting systems.

<sup>54</sup>Deferred tax assets, which are recognized for the carry forward of unused tax losses and unused tax credits, are covered in IAS 12—*Income Taxes* (¶[34–37]).

that were purchased (on trade dates). The settlement accounts within *other accounts payable—other* need to be disaggregated into resident and nonresident categories and, within the resident category, by economic sector.

**4.114** Provisions for losses on impaired financial assets and accumulated depreciation and impairment losses on nonfinancial assets are recorded in *other accounts payable—other*. This accounting treatment contrasts with national financial reporting standards (and the IFRSs) in which provisions, or allowances,<sup>55</sup> for losses on impaired financial assets and accumulated depreciation and impairment losses on nonfinancial assets do not appear as separate accounts on the balance sheet. The balance-sheet presentations in these accounting standards show the estimated recoverable amounts of impaired financial assets, which are obtained by direct write-down in the amount of the estimated impairment loss or through deduction of provisions for the losses. Similarly, the accounting standards specify that accumulated depreciation and accumulated impairment losses on property, plant, and equipment are to be deducted in the presentation of nonfinancial assets.<sup>56</sup> *This Guide recognizes the presentation of nonfinancial assets on this net basis as a fully acceptable alternative to presentation on a gross basis accompanied by a liability account for accumulated depreciation and impairment losses on nonfinancial assets.*

**4.115** For the monetary statistics,<sup>57</sup> provisions for losses on impaired financial assets (and provisions for accumulated depreciation and impairment losses on nonfinancial assets, if nonfinancial assets are presented on a gross basis) are presented *as if* these items are liabilities and are classified as *other accounts payable—other*, despite the fact that these items are “internal accounts” rather than liabilities to creditors of an FC. Treatment of these items as liabilities facilitates the presentation of financial

<sup>55</sup>*Provisions* for losses on impaired financial assets are often referred to as *allowance accounts* in national financial reporting standards. However, provisions for losses is the terminology that is still widely used outside the accounting profession and is the terminology adopted in this *Guide*.

<sup>56</sup>See IAS 16.6, IAS 16.30, and IAS 36—*Impairment of Assets* (which does not apply to impairment of financial assets, which is covered in IAS 39.58–62).

<sup>57</sup>*Provisions* for losses on impaired financial assets do not arise in the context of financial statistics based on the 1993 SNA, which states that “Provisions for bad debt are treated as book-keeping entries that are internal to the enterprise and do not appear anywhere in the System.” [1993 SNA, ¶[10.140]

assets (and nonfinancial assets, if desired) on a gross basis—that is, without deduction of these items from the asset accounts on the balance sheet—while still preserving a full set of balance-sheet accounts.

**4.116** *Provisions for loan losses* is the main category of *provisions for losses on impaired financial assets*. In this *Guide*, it is recommended that *impaired deposits, impaired securities other than shares, defaulted derivative contracts (still in the accounts), and impaired trade-credit receivables be reclassified as loans and that, after reclassification, provisions for loss on these assets be included in provisions for loan losses*. Provisions for losses on impaired financial assets that have not been reclassified as loans (if any such provisions appear in the accounting system) also should be included in *provisions for losses on impaired financial assets*.

**4.117** Major types of *miscellaneous liability items* are:

- *Suspense accounts*. These accounts are used for temporary recording of (1) liabilities for which proper classification has not yet been determined; (2) liabilities for which verification, notification, instructions, or other documentation is required for completing the transactions; and (3) liabilities related to litigation or otherwise in dispute. The category is also used for the recording of any discrepancies that arise from incomplete account reconciliation (including in the consolidation of the accounts of an FC's headquarters and branches). It is recommended that *an FC should clear the items from the suspense accounts as soon as possible*.
- *Provisions—liabilities*.
- *Deferred tax liabilities*.
- *Accrued wages, rent, or other operating expenses*.
- *Accrued taxes*.
- *Commemorative notes and coins (central bank only)*.

**4.118** *Provisions* are defined in *IAS 37—Provisions, Contingent Liabilities and Contingent Assets* and are referred to as *provisions—liabilities* in this *Guide*. These provisions are unrelated to provisions for losses on impaired financial assets. *IAS 37* states:

A *provision* is a liability of uncertain timing or amount. A *liability* is a present obligation of the entity arising from past events, the settlement of which is expected to result in an outflow from the entity of resources embodying economic benefits. . . . (*IAS 37.10*)

A provision should be recognized when: (a) an entity has an obligation (legal or constructive) as a result of a past event; (b) it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation; and (c) a reliable estimate can be made of the amount of the obligation. If these conditions are not met, no provision shall be recognized. (*IAS 37.14*)

**4.119** Under national financial reporting standards based on *IAS 37, provisions—liabilities* are not recognized for future operating losses, but are recognized for various types of expected costs such as those arising from (1) the expectation of an unfavorable judgment in a lawsuit, (2) plans for restructuring an enterprise's operations or management, or (3) an onerous contract—that is, a contract for which the unavoidable costs of meeting the obligation exceed the expected economic benefits (see *IAS 37.63–83*). Provisions are *present* obligations that are recognized as liabilities on the balance sheet,<sup>58</sup> whereas contingent liabilities are *possible* but not probable obligations, or are present obligations that cannot be reliably estimated (see *IAS 37.12–13*). Contingent liabilities are off-balance-sheet items.

**4.120** *Provisions—liabilities* are not recognized as liabilities in the national accounts framework of the *1993 SNA*, which states:

(The only “provision” recognized in the System is accumulated consumption of fixed capital.) Only actual current liabilities to another party or parties are explicitly included. When the anticipated liability becomes actual—for example, a tax lien—it is included. (*1993 SNA, ¶13.22*)

**4.121** In this *Guide*, *provisions—liabilities* are included in *other accounts payable—other*, if the source data for the monetary statistics are based on national financial reporting standards in which *provisions—liabilities* are recognized on the balance sheet. An exception is disputed insurance claims, which should be rerouted from *provisions—liabilities* to *reserves against outstanding claims* in the liability accounts of insurance corporations. To be usable in the financial statistics, the data from the monetary statistics need to be adjusted to exclude *provisions—liabilities* from *other accounts pay-*

<sup>58</sup>In June 2005, the IASB issued an Exposure Draft of Proposed Amendments to *IAS 37—Provisions, Contingent Liabilities, and Contingent Assets*. In the proposed amendments, *provision* as a defined term is replaced by *nonfinancial liability*, which comprises previously defined provisions and other liabilities.

able—other, in accordance with the methodology of 1993 SNA.<sup>59</sup>

## Annex 4.I. Guidance for Distinguishing Between Deposits and Loans

### Deposits

**4.122 Transferable deposits.** A financial instrument through which payments can be made directly to third parties is classified as a transferable deposit regardless of whether the holder is a central bank, ODC, central government, money-holding sector (OFC, state or local government, public nonfinancial corporation, other nonfinancial corporation, or other resident sector), or a nonresident. The only exceptions are transferable deposit accounts that have overdraft facilities, or are impaired (that is, for which the deposit-taker does not honor the depositor's claim). The overdrafts are reclassified as loans rather than as transferable deposit accounts with negative balances. An impaired deposit is reclassified as a loan to facilitate the posting of a provision for expected loss on an impaired financial asset.

**4.123 Deposits in broad money.** The issue of distinguishing between a loan and a deposit does not arise for a financial instrument that is included in the national definition of broad money. In the methodology of the *MFSM* and this *Guide*, the broad-money components are currency outside DCs, deposits, and securities other than shares. In particular, broad money does not include a separate component for loans. Any financial instrument that, in national parlance, is designated or informally described as a loan is classified as an *Other deposit*, if the financial instrument is included in broad money.

**4.124 Zero-interest deposits.** The issue of distinguishing between a loan and a deposit does not arise for a financial instrument that is non-interest-bearing. In the methodology of the *MFSM* and this *Guide*, loans are specified as interest-bearing instruments. The only exceptions are zero-interest deposits that are impaired, and therefore are reclassified as loans, and zero-interest trade credits for which payment

is overdue. An overdue trade credit is reclassified as a loan, as soon as it becomes overdue (whether or not interest charges are to be levied on the overdue trade credit). The zero-interest deposits may be transferable deposits held by the money-holding sectors, zero-interest deposit holdings of the central government (in the central bank or ODCs), non-interest-bearing reserve accounts that ODCs hold at the central bank, or non-interest-bearing transferable deposits that represent a DC's claim on or liability to another DC (including a nonresident DC).

**4.125 Deposits with non-formula-based variable interest rates.** This category pertains to savings accounts. The amount and timing of an increase or decrease in the interest rate is at the discretion of the DC in which the deposit is placed. The new interest rate applies to all deposit accounts (new accounts and those of long standing) in the category. This type of interest rate mechanism does not exist for loans.

**4.126 Insured deposits.** Deposit insurance is a means of ensuring that depositors (usually only households) will recover all or part of their deposit balances in DCs that have been liquidated. Credit guarantees, which are applied to loans and securities other than shares, are somewhat similar to deposit insurance. However, an insured deposit and a loan subject to third-party guarantee can be distinguished on the basis of the institutional arrangements and the nature of asset coverage. Deposit insurance is provided by an institutional unit—the insuring agency—that specializes in insuring broad categories of DCs' liabilities to households. In contrast, credit guarantees apply to an individual loan or loan portfolio (or specific set of securities); that is, they do not guarantee all loans or securities in a particular class. Loans subject to credit guarantees are a means of ensuring that creditors (primarily, central governments and corporate lenders) are covered in the event of default by a borrower or issuer of securities.

**4.127 Deposits in the form of money-market mutual shares.** Money-market mutual fund (MMMF) shares are classified as deposits if the shares are included in broad money. MMMF shares excluded from broad money are classified as *shares and other equity* (along with shares in other mutual funds).

**4.128 Deposits in the form of shares in credit unions and credit cooperatives.** Shares in credit unions and credit cooperatives are included in deposits if the

<sup>59</sup>The reduction in *other accounts payable—other*, arising for the removal of *provisions—liabilities*, results in a corresponding increase in *net worth*, where net worth in the 1993 SNA is defined as total assets minus total liabilities (inclusive of shares and other equity).

shares are included in broad money. Otherwise, the shares are classified as *shares and other equity*.

**4.129** *Deposits in the form of repurchase agreements.* Repurchase agreements are classified as deposits if the repurchase agreements are included in broad money. All other repurchase agreements (and all collateral-based security lending arrangements) are classified as loans.

**4.130** *Margin deposits.* Investors hold deposits to meet the daily settlement requirements for financial futures and for other purposes. Margin deposits held at DCs are invariably classified as deposits. Margin deposits held at a financial auxiliary are classified as deposits if the general ledger of the financial auxiliary includes deposit accounts. If not, the financial auxiliary may include the margin deposits in the category of *other accounts payable—other*. In particular, the margin accounts are not classified as loans.

**4.131** *Deposits incorporated in residential mortgage loan contracts.* This type of arrangement—called an *offset mortgage*—combines a mortgage loan and one or more deposit accounts that the mortgagee holds at the lending institution. The outstanding balances in the deposit accounts are deducted from—that is, offset against—the outstanding amount of the mortgage loan so as to obtain the net outstanding amount for calculation of monthly loan payments. Under flexible offsetting arrangements, the deposit offset can be used to reduce monthly loan payments, occasionally skip monthly payments, or accelerate repayments to shorten the effective maturity of the mortgage loan. Under some arrangements, the mortgagee’s credit-card debt and other types of nonmortgage borrowing can be consolidated with the mortgage loan and the deposit offset. Despite the account consolidation, the mortgagee/depositor retains access to the deposit accounts and receives monthly statements that show the activity of the individual deposit and loan accounts. For the monetary and financial statistics, the deposit and loan components of the offset mortgage are recorded separately in the categories of *Deposits* and *Loans*, respectively. Whether the deposits are included in or excluded from broad money depends on the national definition of broad money.

## Loans

**4.132** *Collateralized loans.* Many business loans, commercial and residential mortgage loans, and

consumer loans for the purchase of automobiles and other durable goods are backed by collateral. Loans that investors acquire from securities brokers and dealers are usually collateralized by securities or other financial assets that the investors are purchasing (or by other securities or other financial assets that the investors already hold). Deposit contracts do not include collateral requirements.

**4.133** *Loans with protective covenants.* Protective covenants appear in some loan contracts, but not in deposit agreements. Protective covenants may stipulate specific actions that a borrower must take—for example, maintain at least a specified amount of working capital throughout the life of a loan. Other protective covenants may specify actions that a borrower must *not* take without the lender’s approval—for example, expansion of fixed assets, acquisition of additional external financing, entry into a merger, establishment of a subsidiary, or replacement of the senior management of the borrowing firm.

**4.134** *Loans with supporting balance requirements.* Loan contracts sometimes specify that, throughout the life of a loan, a borrower must maintain a required amount (or average amount) of deposits in the DC that makes the loan. No analogous requirements exist for deposits.

**4.135** *Loans backed by letters of credit and/or other trade-related documentation.* Trade bills, letters of credit, and other trade-related documents are used to facilitate the lending associated with the acquisition of imports (or sometimes domestic goods). Financial instruments backed by such documentation are classified as loans. No analogous arrangements exist for deposits. Credit in the form of BAs (bankers’ acceptances), which are tradable instruments, should be classified as securities other than shares.

**4.136** *Loans made under commitment.* Loan commitments, which at one time were informal credit lines available to corporate customers who kept adequate deposit balances at lending institutions, are now often firm agreements that lay out lending institutions’ obligations to provide credit in the future (including the amount of credit available and the interest rate to be charged) in return for customers’ payments of fees to guarantee the credit availability. All credit extended under informal credit lines or formal loan commitments (including revolv-

ing credit arrangements) are classified as loans. Credit card balances subject to interest charges are classified as loans. The credit limit for a credit card is the commitment, and the interest-bearing credit balance is a loan made under a revolving credit arrangement.

**4.137** *Financial leases.* All financial leases are classified as loans.

**4.138** *Annuities.* Nontraded annuities are classified as loans. Traded annuities are classified as securities other than shares.

**4.139** *Impaired financial assets.* This *Guide* recommends that, to simplify data compilation, *all impaired financial assets that are nontradable should be reclassified as loans.*

#### Borderline Cases

**4.140** In an exceptional case, the contract terms and conditions for a financial instrument may be so general that straightforward classification as a loan or deposit is impossible. Such cases are unlikely to arise for FCs' deposit and loan contracts with governmental units, nonfinancial corporations, other resident

sectors, or nonresidents. Exceptions are more likely for short-term contracts between FCs.

**4.141** Suppose a contract between two OFCs were titled simply as *Contract* or *Agreement* (but not as *Deposit* or *Loan*). Further suppose the contract specified only (1) the amount of funding, (2) the interest rate, and (3) the schedule for interest payments and redemption of the financial instrument. *This Guide cannot provide recommendations to resolve the classification issue for such contracts. The only recommendation is that the financial instrument be recorded in the same category—whether as a loan or as a deposit—by both parties to the contract.* Implementation of the recommendation implies that the parties to the contract have been in contact and have agreed on the classification.

**4.142** Even if the ODCs classified the financial instrument differently, the analytical data in the *ODCS* (*Other Depository Corporations Survey*), *DCS* (*Depository Corporations Survey*), and *FCS* (*Financial Corporations Survey*) would be unaffected, because of the data consolidation. In compiling the *ODCS*, all claims/liabilities *between* the ODCs would be netted out, irrespective of the classification of the claims and liabilities as loans or deposits.

## 5. Stocks, Flows, and Accounting Rules

### Introduction

The methodology for the compilation of monetary and financial statistics has traditionally focused on stocks and period-to-period changes in stocks. This manual, however, recommends that data be compiled on stocks and on each of the three separate flow components [transactions, revaluations, and other changes in the volume of assets (OCVA)]. (*MFSM*, ¶192)

**5.1** This chapter describes the compilation of the stock and flow data for the individual institutional units—the central bank, other depository corporations (ODCs), and other financial corporations (OFCs). The stock and flow data for the central bank are those that directly appear in its sectoral balance sheet, given that the central bank is a single institutional unit. The stock and flow data for the other institutional units in the financial corporations (FCs) sector are the data that are reported to the compilers of the monetary and financial statistics, who aggregate the data across institutional units to construct the sectoral balance sheets of ODCs and OFCs. Compilation of the sectoral balance sheets and surveys that are derived from the sectoral balance sheets is covered in Chapter 7. The use of the data in the financial statistics is covered in Chapter 8.

### Stocks and Flows: An Overview

*Opening stock.* The value of the outstanding stock of a category of financial assets or liabilities at the beginning of the accounting period. (*MFSM*, ¶191)

*Transactions.* Financial flows that arise, by mutual agreement between institutional units, from the creation, liquidation, or change in ownership of financial assets or liabilities. Changes in ownership occur through the sale, transfer, or other discharge of all rights, obligations, and risks associated with a financial asset or liability. (*MFSM*, ¶191)

*Revaluations.* Financial flows arising from changes in (1) the prices of financial assets and liabilities and/or (2) the exchange rates that affect the domestic currency values of assets and liabilities denominated in foreign currency. (*MFSM*, ¶191)

*OCVA.* Financial flows that arise from asset and liability changes other than those arising from transactions and revaluations. Included are write-offs of claims, reclassification of assets, monetization or demonetization of gold, allocation or cancellation of SDRs, and other events. (*MFSM*, ¶191)

*Closing stock.* The value of the outstanding stock of a category of financial assets or liabilities at the end of an accounting period, which equals the value of the opening stock plus flows arising from transactions, revaluations, and OCVA. (*MFSM*, ¶191)

[Note: These definitions also apply to nonfinancial assets.]

### Data Sources

**5.2** Stock and flow data need to be collected or estimated for every category of assets and liabilities on an FC's balance sheet that contains the asset classifications and economic sectorization in the monetary and financial statistics. These data can be obtained directly from the accounting records of the FC, if the corporation's information system embodies the financial asset classifications, economic sectorization, valuations, and other accounting rules of the *MFSM* methodology. Other data sources within the FC or, in exceptional cases, sources outside the corporation may be needed to supplement the available accounting data. The stock and flow data for some asset and liability categories need to be estimated, when unavailable from the FC's information system or other sources. For the stock data, estimation is most common for the fair values of securities (including share and other equities), insurance technical reserves, financial derivatives, and nonfinancial



Table 5.1. Stock and Flow Data: Adding-Up Requirements

	OS	T	VC	OCVA	CS	CS – OS – T – VC – OCVA
<b>Assets</b>						
Asset 1						0
Asset 2						0
...						...
Asset <i>m</i>						0
<b>Total Assets (TA)</b>						<b>0</b>
<b>Liabilities</b>						
Liability 1						0
Liability 2						0
...						...
Liability <i>n</i>						0
<b>Total Liabilities (TL)</b>						<b>0</b>
<b>Vertical check: TA – TL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

assets. For the flow data, estimation may be required to obtain data on transactions and valuation changes for some assets and liabilities.

### Adding-Up Requirements

**5.3** The stock and flow framework has both vertical and horizontal adding-up requirements for the data (Table 5.1). For the monetary statistics, the vertical adding-up requirements are based on the balance-sheet identity—that is, the equality between total assets and total liabilities or, equivalently, the requirement that total assets minus total liabilities equals zero. In the *MFMS* methodology, the vertical adding-up requirements are applicable to each column of flow data—transactions, valuation changes, and other changes in the volume of assets (OCVA)—as well as to the columns of opening and closing stocks. The sum of the transaction entries in the asset accounts equals the sum of the transaction entries in the liability accounts for the reporting period; the sum of the valuation changes, or revaluations, for the assets equals the sum of the valuation changes for the liabilities; and the sum of the OCVA entries in the asset accounts equals the sum of the OCVA entries in the liability accounts. Computations to verify the satisfaction of the vertical adding-up requirements are called *vertical checks*.

**5.4** The horizontal adding-up requirements are based on the stock and flow identity. By definition, the *sum* of the opening stock (*OS*) and three

flows—transactions (*T*), valuation changes (*VC*), and *OCVA*—is equal to the closing stock (*CS*) for each category of assets and liabilities. The basic stock-flow equation is:

$$(5.1) \quad CS = OS + T + VC + OCVA,$$

or

$$(5.2) \quad CS - OS - T - VC - OCVA = 0.$$

Computations to verify the satisfaction of the horizontal adding-up requirements are called *horizontal checks*.

**5.5** If data are collected or estimated for each stock and flow component for an asset or liability, a horizontal check can be applied to ensure that the stocks and flows satisfy the adding-up requirement. However, collection or estimation of separate data for each flow component for every category of assets and liabilities, though ideal, may be too burdensome and, therefore, impractical.

**5.6** For each category of assets and liabilities, the methodology requires the collection or estimation of separate data for *OS*, *CS*, *OCVA* and, if possible, for at least one of the other flows—either *T* or *VC*. The data for one flow component—either *T* or *VC*—can be obtained residually, using the horizontal adding-up requirement and the data for the opening stock, closing stock, *OCVA*, and one other flow (that is, either *VC* or *T*). Data obtained residually are called *derived data*.

## Opening and Closing Stocks

The general recommendation in this manual is that valuations should be based on market prices or market-price equivalents of financial assets and liabilities. Valuation according to market price equivalent is needed for valuing financial assets and liabilities that are not traded in financial markets or are traded infrequently. For these assets and liabilities, it is necessary to estimate *fair values* that, in effect, are approximations to market prices. . . . Other valuation rules apply to assets in the form of loans and, in the context of the monetary statistics in Chapter 7, to liabilities in the form of shares and other equity. (*MFSM*, ¶196)

[Note: Other valuation rules also apply to deposits, which are valued in nominal amounts.]

**5.7** The *OS* data are synonymous with the *CS* data for the preceding period. The *OS* and *CS* data are compiled in accordance with the valuation and other accounting rules that are recommended in the *MFSM*, and a vertical check is used to verify that the stock data satisfy the balance-sheet identity.

## Other Changes in the Volume of Assets (OCVA)

The OCVA account records the changes in assets and liabilities between opening and closing balance sheets that are due neither to transactions between institutional units nor to changes in value. (*MFSM*, ¶193)

In the *1993 SNA*, the circumstances that result in entries in the OCVA account are grouped into nine categories, most of which have several subcategories. (*MFSM*, ¶194)

**5.8** The OCVA entries for an individual FC can be separated into those arising from extraordinary or infrequent events and those that are usually recorded on a regularly recurring basis. Many FCs are likely to experience few, if any, extraordinary events—for example, earthquakes, wars, riots, uncompensated seizures, etc.—that give rise to asset losses that are to be posted to OCVA. In addition, an FC would be expected to have relatively infrequent OCVA entries that result from financial assets or liabilities being reclassified across financial asset categories.

**5.9** Several sets of OCVA entries are needed when an FC is reclassified within the FC sector. Suppose an OFC is reclassified as an ODC, because it begins to issue liabilities that are included in the national

definition of broad money. OCVA entries arise in the accounts of the reclassified FCs, as well as in the accounts of all FCs that have claims on (or liabilities to) the reclassified FC, because these financial positions need to be reclassified as due from (or due to) an ODC, rather than an OFC.<sup>1</sup> Reclassification from an OFC to an ODC is likely to occur relatively infrequently in most countries. When such reclassification occurs, the data for the OCVA entries should be directly available from the accounting records of the FCs. Reclassification from an ODC to an OFC is a rare event.

**5.10** The main types of OCVA entries that are recorded on a regularly recurring basis are:

- Transfer of profit or loss to retained earnings within the liability account for shares and other equity.
- Transfer (that is, appropriation) of retained earnings to general and special reserves within the liability account for shares and other equity.
- Provisions (also referred to as allowances) for losses on loans, securities, and other types of impaired financial assets.
- Write-offs of loans, securities, or other types of impaired financial assets.

**5.11** Data for the OCVA entries should be readily available from an FC's accounting records. The treatment of the recurring types of OCVA is consistent with the accounting for OCVA in the *1993 SNA*, even though bad debt write-off is the only one of these recurring types of OCVA that gives rise to OCVA entries in the accounts of the *1993 SNA*. In particular, the *1993 SNA* framework does not contain accounts for provisions for loan losses. In the monetary statistics, a provision for loan losses is treated as the precursor of a loan write-off and, like loan write-offs, is treated as an OCVA.<sup>2</sup> In addition, accounting entries such as the transfer of profit or loss for the period to retained earnings do not appear in the *1993 SNA*

<sup>1</sup>OCVA entries would also arise through the transfer of the reclassified FC's data from the sectoral balance sheet of OFCs to the sectoral balance sheet of ODCs. These OCVA entries do not appear in the compilation of the data for the individual FC, but rather are made when the data reported by the individual FCs are aggregated into the sectoral balance sheets, as part of the monetary statistics compilation that is described in Chapter 7.

<sup>2</sup>The provision for an impaired loan is entered as an OCVA in the provision account with a corresponding OCVA contra-entry in expenses within the profit or loss accounts. Write-off of the loan results in OCVA entries in the loan account and the provision account, thereby eliminating the loan and the provision for loan losses, as posted earlier, from the balance sheet.

framework, wherein the liability account for *shares and other equity* is not disaggregated into book-value components—funds contributed by owners, retained earnings, etc.<sup>3</sup>

**5.12** Sectoral reclassifications of FCs should be recorded as if these events occurred at the beginning of the reporting period. In particular, the asset prices (or fair values) and exchange rates that prevailed at the beginning of the period should be used to calculate the amounts for the OCVA entries. In determining the amounts for OCVA entries arising from reclassification of financial assets and liabilities, the asset prices (or fair values) and exchange rates that prevailed on the date of the reclassification should be used, if possible. OCVA entries from events such as catastrophic loss or confiscation of assets or from recurring events—that is, entries for transfers of profits to retained earnings, provisions for impaired loans or other assets, write-offs of loans or other assets, retained earnings appropriations to general and special reserves, and depreciation allowances—should be entered into the accounts (or treated as if entered into the accounts) during the last day of the reporting period.

### Transactions

This manual and the *1993 SNA* recommend recording transactions at the time of the change in ownership of a financial asset (that is, when all rights, obligations, and risks are discharged). (*MFSM*, ¶225)

Accrued interest on deposits, loans, and securities other than shares should be incorporated into the outstanding amount of the financial asset or liability, rather than being treated as part of other accounts receivable/payable. (*MFSM*, ¶227)

**5.13** Transactions in financial assets and liabilities should include the accrued interest for the period, as well as transactions arising for the creation, liquidation, and change in ownership of financial assets and liabilities.

**5.14** Transaction data are easiest to obtain for those categories of financial assets and liabilities that are not subject to valuation changes (that is,  $VC = 0$ )—

<sup>3</sup>The valuation of the liability account for shares and other equity—at book value in the monetary statistics and at market or fair value in financial statistics and the *1993 SNA* framework—is one of the major differences between the accounting rules for the monetary statistics and those for the financial statistics.

namely, assets and liabilities that are recorded at book value and are denominated in national currency (Table 5.2). The transactions for each category can be derived residually, if data are available for the opening stock (*OS*), closing stock (*CS*), and *OCVA*. If  $VC = 0$ , transactions for the asset or liability category are given by:

$$(5.3) \quad T = CS - OS - OCVA.$$

**5.15** In most reporting periods, *OCVA* entries are unlikely for some asset and liability categories. If  $OCVA = 0$  and  $VC = 0$ , transactions are the only source of period-to-period change in the stock of the asset or liability; that is,  $T = CS - OS$ .

**5.16** Assets and liabilities that are valued at market prices (or fair values) and/or are denominated in foreign currency (Table 5.3) generally have non-zero values for both transactions and valuation changes. For each asset or liability category, data can be collected or estimated for either *T* or *VC*—as well as for *OS*, *CS*, and *OCVA*—to facilitate the residual derivation of the remaining flow, either *VC* or *T*.<sup>4</sup>

**5.17** The accounting or other information systems of the FCs already may contain the transaction data, or it may be possible to expand the information system to generate at least some transaction data. Direct collection of transaction data is most practical for asset and liability categories for which few transactions take place during a reporting period. For example, the central bank might engage in only a few transactions in monetary gold or SDRs. Similarly, a small or specialized FC might engage in only a few transactions in foreign currency, securities other than shares, shares and other equity, or financial derivatives in a single reporting period.

**5.18** Compilation of transactions data requires disaggregated data on accrued interest, as well as disaggregated data on purchases, sales, and redemptions of financial assets and liabilities. Accrued interest data that are disaggregated by financial asset category and economic sector should be obtainable from the FC's accounting records (see Chapter 2, Annex 2.1).

<sup>4</sup>Direct collection of data for both *T* and *VC* is recommended whenever practical.

**Table 5.2. Transactions: By Asset/Liability Category**

Asset/Liability	Transactions
Monetary gold (central bank asset)	Purchases <i>less</i> sales
SDR holdings (central bank asset)	Purchases <i>less</i> sales <sup>1</sup> <i>Plus</i> accrued interest on SDR holdings <i>Less</i> accrued interest on SDR allocation <i>Plus</i> remunerations in SDRs from the IMF <i>Less</i> payments in SDRs of charges to the IMF
National currency holdings (other than central bank)	Net acquisition
National currency (central bank liability)	Change in currency in circulation
Foreign currency holdings	Purchases <i>less</i> sales
Deposits: Non-interest-bearing	Deposits <i>less</i> withdrawals
Deposits: Interest-bearing—assets or liabilities	Deposits <sup>2</sup> <i>less</i> withdrawals <i>Plus</i> accrued interest for the current period
Securities other than shares—assets	Purchases <i>less</i> sales and redemptions <sup>3</sup> <i>Plus</i> accrued interest for the current period
Securities other than shares—liabilities	Issuances <i>less</i> redemptions <sup>3</sup> <i>Plus</i> accrued interest for the current period
Loans—assets	New lending <i>less</i> loan principal repayments <sup>3</sup> <i>Plus</i> accrued interest for the current period
Loans—liabilities	New borrowing <sup>3</sup> <i>less</i> loan principal repayments <sup>3</sup> <i>Plus</i> accrued interest for the current period
Shares and other equity—assets	Purchases <i>less</i> sales
Shares and other equity—liabilities	Funds contributed by owners: Inflow from issuance of new shares Retained earnings: Outflow from dividend payments
Financial derivatives—assets	Purchases <i>less</i> sales, settlements, and expirations
Financial derivatives—liabilities	Sales <i>less</i> settlements and expirations
Insurance technical reserves—assets	Changes in prepayments of premiums
Insurance technical reserves—liabilities	Change in reserves and prepayments of premiums
Other accounts receivable/payable	Changes in trade credit and advances, etc.
Nonfinancial assets	Acquisitions <i>less</i> disposals

<sup>1</sup>Transactions include only purchases and sales of SDRs; SDRs obtained from a new SDR allocation are an OCVA.

<sup>2</sup>Includes interest that has become due for payment and has been posted directly to deposit accounts.

<sup>3</sup>Includes “redemptions” arising from (1) debt cancellation by mutual agreement (debt forgiveness) and (2) debt reorganization.

### Valuation Changes (Revaluations)

The *revaluation account*, as specified in the 1993 SNA and in this manual, is used to show the holding gains or losses arising from changes in market values (or fair values) of stocks of financial assets and of outstanding liabilities. A *holding gain* occurs whenever an asset increase in value or a liability decreases in value; a holding loss occurs whenever an asset decreases in value or a liability increases in value. (MFSM, ¶199)

A *nominal holding gain or loss* is the total change in value of a financial asset or liability resulting from a change in market price, fair value, and/or exchange rate. Nominal holding gains and losses on nonfinancial assets and financial assets and liabilities are included in the presentation of the monetary statistics under the heading of *valuation changes*. . . . (MFSM, ¶200)

**5.19** Valuation changes arise from changes in market prices (or fair values) of assets and liabilities

**Table 5.3. Valuation Changes: By Asset/  
Liability Category**

Asset or Liability	Price Changes	Exchange Rate Changes
Monetary gold (central bank asset)	√	√
SDRs (central bank asset)		√
National currency		
Foreign currency		√
Deposits—In foreign currency		√
Securities other than shares		
In domestic currency	√	
In foreign currency	√	√
Loans		
In domestic currency		
In foreign currency		√
Shares and other equity (assets)		
In domestic currency	√	
In foreign currency	√	√
Shares and other equity (liabilities)	√ (Financial statistics only)	
Insurance technical reserves (assets)—In foreign currency		√ <sup>1</sup>
Insurance technical reserves (liabilities)	√	√ <sup>1</sup>
Financial derivatives		
In domestic currency	√	
In foreign currency	√	√
Other accounts receivable/payable		√ <sup>1</sup>
Nonfinancial assets	√	

<sup>1</sup>Applies to components denominated in foreign currency.

and from changes in the exchange rates that apply to foreign-currency-denominated assets and liabilities. The asset and liability categories that are subject to valuation changes in the *MFSM* methodology are shown in Table 5.3.

**5.20** This *Guide* recommends, in order of preference, three alternatives for obtaining data for valuation changes:

- Collect the data directly from the accounting or other information systems of the FC.
- Derive the data from the horizontal adding-up requirement and the data for the stocks and other flows—that is, using  $VC = CS - OS - T - OCVA$ . Data for  $T$ , as well as for  $OS$ ,  $CS$  and  $OCVA$ , are required.
- Jointly estimate the data for valuation changes and transactions, using the data for  $OS$ ,  $CS$ , and  $OCVA$  and the data for the asset prices and exchange rates that prevailed during the reporting period.

**5.21** Availability of valuation-change data will depend on the national financial reporting standards that are applicable to an FC and the extent to which the accounting system can be expanded, if necessary, to provide data for the monetary and financial statistics, as shown in Chapter 2, Annex 2.2. The recommendation in this *Guide* is that, to the extent possible, *the valuation change data for each category of financial assets and liabilities should be obtained directly from the accounting or other information systems of the FC*. Derivation or estimation of valuation-change data should be limited to those categories of financial assets or liabilities for which the appropriate data cannot be obtained from the FC's information system, where appropriate data refers to those that accord with the valuation rules in the *MFSM* and this *Guide*.

### Estimation of Transactions and Valuation Changes from Exchange Rate Movements

**5.22** The estimation method recommended in this *Guide* is a practical approach for approximating the valuation changes that arise exclusively from exchange rate movements—specifically, for estimating the valuation changes for foreign-currency-denominated financial assets and liabilities that are measured at book value when expressed in the foreign currency units. Transaction and valuation changes must be estimated whenever data are available for the *sum* of  $T$  and  $VC$ , but not for  $T$  and  $VC$  separately.

**5.23** Equations for estimating  $T$  and  $VC$  are presented for two cases: a category of foreign-currency-denominated deposits that has no  $OCVA$  entry for the period, and a category of foreign-currency-denominated loans that has an  $OCVA$  entry arising from a provision for loan losses. The derivation of the estimation equations and numerical examples of

the calculations for  $T$  and  $VC$  in each case are presented in Annex 5.1.

**5.24** Suppose that transactions and valuation changes are to be estimated for a single category of an ODC's deposits—namely, those denominated in a single foreign currency and constituting liabilities to other nonfinancial corporations. In the *MFSM* methodology, each transaction should be valued at the exchange rate that applied to the transaction—that is, the exchange rate that prevailed at the time of the transaction. If data on the amount and timing of the transactions are unknown, it is necessary to choose a single exchange rate as representative of all transactions, even though the transactions actually occurred at various exchange rates during the reporting period.

**5.25** The recommendation in this *Guide* is that *the daily average exchange rate for the period—denoted as  $e_m$ —should be used to represent the single exchange rate for all transactions during the period.*<sup>5</sup> Alternatively, the single exchange rate to use in the estimation could be that at the beginning of the current period (that is, the end of the preceding period) denoted as  $e_0$ , or that at the end of the current period, denoted as  $e_1$ —or the average of  $e_0$  and  $e_1$ . However,  $e_m$  is viewed as the most representative exchange rate for a category of financial assets or liabilities for which transactions are conducted on a day-to-day basis throughout the reporting period.

#### Estimation in the absence of OCVA

**5.26** Transactions and valuation changes for the deposit category can be estimated by using the data on exchange rates, the *opening stock denominated in foreign currency* ( $S_0$ ), and the *closing stock denominated in foreign currency* ( $S_1$ ). The equations for the transactions and valuation-change estimates for the deposit category are:

$$(5.4) \quad T = e_m(S_1 - S_0),$$

and

$$(5.5) \quad VC = (e_1 - e_m)S_1 - (e_0 - e_m)S_0.$$

**5.27** Equivalently, estimates for  $T$  and  $VC$  can be calculated from the data for stocks translated into

<sup>5</sup>The exchange rate refers to the number of units of national currency per unit of foreign currency.

national currency units:  $OS = e_0S_0$  and  $CS = e_1S_1$ . Substituting for  $S_0$  and  $S_1$  in equations (5.4) and (5.5), the transaction and valuation-change estimates are:

$$(5.6) \quad T = (e_m/e_1)CS - (e_m/e_0)OS,$$

and

$$(5.7) \quad VC = [1 - (e_m/e_1)]CS - [1 - (e_m/e_0)]OS.$$

#### Estimation in the presence of OCVA

**5.28** Transactions and valuation changes for the loan category for which an OCVA entry for a provision for loan losses is applicable can also be estimated from the stock data denominated in foreign currency ( $S_0$  and  $S_1$ ) or, equivalently, from the stock data translated into national currency units ( $OS$  and  $CS$ ). Each equation includes OCVA denominated in foreign currency. The equations for estimating  $T$  and  $VC$  from the data for the foreign-currency-denominated stocks are:

$$(5.8) \quad T = e_m(S_1 - S_0 - OCVA),$$

and

$$(5.9) \quad VC = (e_1 - e_m)S_1 - (e_0 - e_m)S_0 - (e_1 - e_m)OCVA.$$

**5.29** The equations for estimating  $T$  and  $VC$  from the stock data converted into national currency units are:

$$(5.10) \quad T = (e_m/e_1)CS - (e_m/e_0)OS - e_mOCVA,$$

and

$$(5.11) \quad VC = [1 - (e_m/e_1)]CS - [1 - (e_m/e_0)]OS - (e_1 - e_m)OCVA.$$

**5.30** The estimation method can be applied to foreign currency holdings and any category of foreign-currency-denominated assets or liabilities that are recorded at nominal or book value when expressed in foreign currency units—principally, foreign-currency-denominated deposits and loans.<sup>6</sup> Extensive data disaggregation is required for FCs that have several categories of assets and liabilities that are denominated in various foreign currencies. Separate estimation is applied to the data for each foreign

<sup>6</sup>Quantitatively less significant categories include foreign-currency-denominated prepayments of insurance premiums and trade credit and advances, which normally would arise from transactions with nonresident corporations.

currency of denomination and each economic sector that is an issuer or holder of the foreign-currency-denominated assets or liabilities in each financial asset/liability category.

**5.31** The accuracy of the *T* and *VC* estimates depends on the extent to which the daily average exchange rate,  $e_m$ , is representative of the actual exchange rates that applied to the individual transactions. In general, the estimates are likely to be more reliable when deposit or loan activity is characterized by a large number of transactions that are relatively uniform in amount and are spread across the reporting period. The estimates are likely to be less reliable when the exchange rate has been subject to considerable fluctuation, or the exchange rate has depreciated or appreciated sharply during the period.

**5.32** The accounting system may specify that accrued interest is to be posted to loan and/or deposit accounts on a daily basis, thereby spreading the accrued-interest transactions across the reporting period. Daily posting of the accrued interest is compatible with the use of the daily average exchange rate ( $e_m$ ) in estimating *T* and *VC*, since the accrued-interest transactions are spread evenly across the period. At the other extreme, the accounting system may specify that all accrued interest is to be posted at the end of the period. The end-of-period exchange rate ( $e_1$ ) is the exchange rate that is applicable to the end-of-period postings of accrued interest, possibly suggesting that  $e_1$  should be used in place of  $e_m$  in estimating *T* and *VC*. However, the recommendation in this *Guide* is to *use the daily average exchange rate in the estimation and implicitly treat the accrued interest as if it had been posted on a daily basis throughout the period.*

**5.33** In principle, an exchange rate quotation for a single day or the average exchange rate for a specific week could be used in the estimation, if it were known that most of the transaction volume had occurred in a single day or week during the reporting period. However, use of the average exchange rate ( $e_m$ ) is recommended so as to standardize the estimation method across asset and liability categories, reporting periods, and FCs. Availability of data on the timing and amount of transactions would indicate that an FC probably has the capacity for developing the direct collection of transactions data, eliminating the need to estimate both *T* and *VC*.

## Stocks and Flows: By Asset Classification

**5.34** The compilation of stock and flow data for each category of assets and liabilities is covered under a separate subheading in this section. The asset and liability categories and the FCs that hold the assets or issue the liabilities are shown in Table 5.4.

**5.35** Collection, estimation, and derivation of stocks and flows—transactions, valuation changes, and OCVA—are described for each financial asset and liability category.

**5.36** Specific compilation issues are covered in the separate subsections for asset and liability categories to which these issues pertain. Special issues for securities other than shares include securities valuation using fair-value methods and approaches to the measurement of accrued interest. Special consideration is also given to the estimation of holdings, disaggregated by economic sector, of securities (securities other than shares, as well as shares and other equity) that are in bearer form—that is, those traded without keeping track of the changes in ownership across economic sectors. Special issues for loans include the treatment of provisions for loan losses, loan write-offs, accrual/nonaccrual of interest on nonperforming loans, and principal and interest arrears. Other major asset-specific issues involve the valuation of shares, financial derivatives, insurance technical reserves, and nonfinancial assets.

### Monetary Gold (Central Bank Only)

**5.37** In the world market, gold is priced by troy ounce.<sup>7</sup> It is recommended that the bid price<sup>8</sup> in the London gold market be used to value the closing stocks of gold. Gold prices quoted in U.S. dollars or another major currency should be translated into domestic currency units using the midpoint of the bid-offer spread for the market exchange rate. Transactions should be valued at the actual prices at which the gold is bought or sold and at mar-

<sup>7</sup>Gold, which normally is in the form of bullion (that is, gold bars or ingots), must be least 95.5 percent pure to meet the purity standards for monetary gold.

<sup>8</sup>World gold price quotations are widely available in U.S. dollars, pounds sterling, euros, and other major currencies. The valuation can be based on the morning or afternoon price quotation for the London gold “fix”—a price that is established through competitive interactions among five firms that are leading world dealers.

**Table 5.4. Assets and Liabilities of FCs**

Asset and Liability Categories	Balance Sheet	
	Assets	Liabilities
Monetary gold and SDRs		
Monetary gold	Central bank	
SDRs	Central bank	Central bank <sup>1</sup>
Currency		
National currency	FCs	Central bank
Foreign currency	FCs	
Deposits		
Transferable deposits	FCs	DCs <sup>2</sup>
Other deposits	FCs	DCs and other financial intermediaries <sup>3</sup>
Securities other than shares	FCs	FCs
Loans	DCs and other financial intermediaries <sup>4</sup>	FCs
Shares and other equity	FCs	FCs
Insurance technical reserves		
Net equity of households in life insurance reserve		Life insurance corporations
Net equity of households in pension funds		Pension funds
Prepayment of premiums and reserves against outstanding claims	FCs	FCs
Financial derivatives	FCs	FCs
Other accounts receivable/payable	FCs	FCs
Nonfinancial assets	FCs	Not applicable

<sup>1</sup>Refers to the SDR allocation, a component of shares and other equity.

<sup>2</sup>May also include other financial intermediaries that accept transferable deposits from DCs, central government, and/or nonresidents, but do not accept deposits included in the national definition of broad money.

<sup>3</sup>Insurance corporations, pension funds, or financial auxiliaries may accept relatively small amounts of deposits that are incidental to their operations, rather than for financial intermediation.

<sup>4</sup>In addition, life insurance corporations often extend policy loans. Other insurance corporations, pension funds, and financial auxiliaries also may extended relatively small amounts of loans that are incidental to their operations. Non-interest-bearing claims of these FCs should be classified as other accounts receivable.

ket exchange rates on the dates of the individual transactions.

**5.38** Monetization or demonetization of gold is recorded as an OCVA in the sectoral balance sheet of the central bank. A central bank sale of monetary gold to another central bank (or some other prescribed holder of monetary gold, such as the IMF) is recorded by both parties as a transaction in monetary gold. A sale of nonmonetary gold between parties who are not prescribed holders of monetary gold is recorded by both parties as a transaction in a nonfinancial asset. A central bank purchase of gold from a resident or nonresident unit that can hold gold only as a valuable (that is, nonmonetary, or commodity, gold) is initially recorded as a transaction in nonmonetary

gold—that is, an increase in nonfinancial assets of the central bank and a decrease in nonfinancial assets of the seller. To monetize the gold, the central bank must record OCVA entries to reclassify the gold—that is, a positive entry in the monetary gold category and a negative entry in nonfinancial assets. The monetization can occur as soon as the commodity gold has been acquired and has been determined to meet the standards for monetary gold. To demonetize gold (possibly, in preparation for sale to a holder of nonmonetary gold only), the central bank would record OCVA entries for a gold reclassification—that is, a negative entry in the monetary gold category and a positive entry in nonfinancial assets. The gold price and market exchange rate that prevailed on the date of the gold monetization or demonetization should



be used in determining the amounts of the OCVA entries.

### SDRs (Central Bank Only)

**5.39** The SDR holdings of a central bank are denominated in SDRs, a unit of account as well as the designation for this financial asset, which was created in 1970 by the IMF. The *SDR exchange rate* (usually referred to as the *SDR rate*)—the exchange rate between the SDR unit and the U.S. dollar—is determined daily by the IMF (and posted daily on the Internet; see [www.imf.org](http://www.imf.org)) by summing the U.S. dollar value, based on market exchange rates, of a basket of four currencies (the euro, Japanese yen, pound sterling, and U.S. dollar). The national currency value of stocks and flows for the SDR holdings is determined by converting the SDR amounts into U.S. dollar equivalents, using the SDR rate, followed by conversion of the U.S. dollar equivalents into national currency units, using the market exchange rate that prevailed between the national currency and the U.S. dollar at the end of the reporting period or on the date of the transaction.<sup>9</sup>

**5.40** Flows for SDR holdings arise from OCVA, transactions, and valuation changes. OCVA arise only from a new allocation of SDRs—a very infrequent event—or the cancellation of an SDR allocation.<sup>10</sup> Transactions arise from (1) SDR purchases and sales between qualified SDR holders, (2) accrued interest on SDR holdings,<sup>11</sup> (3) member country payment of charges to the IMF, and (4) IMF payments to (that is, remuneration of) member countries.<sup>12</sup> Stock and transaction data for SDR holdings should be available from the accounting department of the central

<sup>9</sup>In particular, the valuation of stocks or flows should *not* be based on the representative rate—an exchange rate between the national currency and the SDR, that is used in the IMF's accounting for its financial relationship with a member country and that is realigned with market exchange rates on an infrequent basis.

<sup>10</sup>Cancellation would occur only if a country were to withdraw from IMF membership or if the SDR facility of the IMF were to be dismantled.

<sup>11</sup>A member country receives interest on its SDR holdings and pays interest on its SDR allocation. A single rate, the *SDR interest rate*, applies to both SDR holdings and allocations. The SDR interest rate is revised at the end of each financial quarter (based on the IMF's fiscal year), as of the end of April, July, October, and January.

<sup>12</sup>For the IMF's currency purchase and lending facilities, creditor members receive remuneration in SDRs, and debtor members pay charges in SDRs.

bank.<sup>13</sup> Valuation changes for SDR holdings can be derived residually from the data for opening and closing stocks, transactions, and OCVA (in the event of a new SDR allocation).

### National Currency

**5.41** National currency notes and coins are held by all FCs that have cash transactions with their clients. The stock of national currency holdings of FCs is valued in nominal amount; therefore, valuation changes are not applicable. OCVA for national currency holdings of an FC are rare, arising in exceptional circumstances such as when currency is destroyed during events such as wars, riots, or confiscation of an FC's assets. Given  $VC = 0$  and  $OCVA = 0$ , transactions are equal to the period-to-period changes in the stock of currency in circulation—that is,  $T = CS - OS$ .

**5.42** National currency appears as a liability, *currency in circulation*, in the sectoral balance sheet of the central bank. The central bank holds currency that, subsequent to issuance, has returned to the central bank by way of transactions with ODCs and possibly other institutional units. For the monetary and financial statistics, the central bank accounts show only the liability, currency in circulation, which is defined as the central bank's total currency issuance less its currency holdings.<sup>14</sup> A related concept is *currency outside DCs*, defined as currency in circulation less ODCs' holdings of national currency (vault cash).

### Foreign Currency

**5.43** Foreign currency is held by all DCs and OFCs that engage in foreign exchange operations. Foreign currency should be recorded at nominal value when expressed in foreign currency units and should be converted to national currency units on the basis of

<sup>13</sup>The central bank in each member country receives a monthly statement from the IMF's Finance Department (formerly, Treasurer's Department) that shows the SDR balances and transactions during the month. The Statistics Department of the IMF also directly provides SDR and other IMF accounts data to compilers in many member countries.

<sup>14</sup>Special cases are countries in which some or all of the national currency is issued by the central government and "dollarized" countries in which the U.S. dollar or some other foreign currency is used as legal tender in lieu of, or in addition to, a national currency. These exceptional cases are covered in Chapter 6 of this *Guide*.

the market exchange rate that prevailed on the transaction or balance sheet date. OCVA applicable to foreign currency arise when the currency is destroyed or confiscated during extraordinary events.

**5.44** The total stock of foreign currency is compiled from the data for the end-of-period stock of each foreign currency. The stock of each foreign currency is multiplied by the market exchange rate—that is, units of national currency per unit of foreign currency—that prevailed at the end of the period. Foreign currency transactions should be valued at the exchange rates applicable to the individual transactions. Transactions data should be available from the foreign exchange records in the information systems of DCs and OFCs, including small-scale currency exchanges that specialize in the purchase and sale of foreign currency. Valuation-change data may be accessible from the profit or loss accounts or elsewhere in the information systems of many or all FCs.

**5.45** In the absence of direct data sources, transactions and valuation changes are estimated on a currency-by-currency basis using the daily average exchange rate between the national currency and each foreign currency. The daily average should be the average of exchange rates for all days of the period. Rate quotations for weekend days and holidays should be the exchange rates that prevailed on the closest preceding business day.

**5.46** Market exchange rate quotations in major world markets such as the foreign exchange market in London or New York should be used for convertible currencies. Each market exchange rate used for conversion to national currency units or in estimating transactions and valuation changes should be the midpoint rate of the bid-ask spread.

**5.47** For nonconvertible national currencies, it may be necessary to use exchange rate quotations from regional or other specialized foreign exchange markets. If the exchange rate for the last day of the reporting period is unavailable, the rate quotation for an earlier date (as near to the end of the reporting period as possible) should be used for converting stock data to national currency units. Daily average exchange rates may be unavailable in some cases in which transactions and valuation changes are to be estimated. If so, the exchange rate or exchange rate average that is thought to approximate the daily average for the period most closely should be used.

## Deposits

**5.48** Non-interest-bearing deposits (assets and liabilities) denominated in national currency should be recorded as the nominal amount of the outstanding deposit balances. Interest-bearing deposits denominated in national currency should be recorded at book value—that is, the nominal amount of the outstanding deposit balance *plus* the accrued interest on the deposits. Deposit transactions should be recorded in the nominal amount of net deposit (placements *less* withdrawals) *plus* the accrued interest for the reporting period. Given that valuation changes do not apply to national-currency-denominated deposits, the amount of transactions equals the period-to-period change in deposits *less* OCVA, if applicable.

**5.49** Stocks of deposits that are denominated in foreign currency should be recorded at book value (nominal amount *plus* accrued interest) when expressed in foreign currency and should be converted to domestic currency units on the basis of the market exchange rates that prevailed at the end of the reporting period.<sup>15</sup> Transactions in foreign-currency-denominated deposits are valued at the market exchange rates applicable to the transactions. If possible, direct collection of transactions and valuation-change data is recommended. If data are available for only one of the two flows, either transaction or valuation change (as well as for any applicable OCVA), the data for the other flow can be derived residually. If data are unavailable for both transactions and valuation change, the amount of each flow can be estimated on the basis of the daily average exchange rates for the period.

**5.50** Major sources of OCVA are reclassifications of deposits as (1) securities other than shares for deposits that become negotiable, (2) “deposits included in broad money” for deposits that are newly included in the national definition of broad money, and (3) loans for deposits that have become impaired. OCVA also arise from the sectoral reclassification of deposit claims and liabilities—for example, those of an OFC that has been reclassified as an ODC, or deposit liabilities to a public nonfinancial corporation that, after privatization, is reclassified as an other nonfinancial corporation.

<sup>15</sup>Stock and flow data for the IMF No. 1 and No. 2 Accounts (and securities substituted for No. 1 Account obligations) are provided to central banks by the IMF’s Finance Department (formerly, Treasurer’s Department) and, upon request, by the IMF’s Statistics Department. These data should be reconciled with the accounting records of the central bank.

## Securities Other Than Shares

### General principles

**5.51** Securities other than shares are valued at market prices or fair values. Securities denominated in foreign currency are recorded at the market or fair value expressed in foreign currency and are converted to domestic currency units on the basis of the market exchange rates that prevailed at the end of the reporting period. Transactions in securities other than shares, on the asset side, consist of securities purchases *less* securities sales and redemptions *plus* accrued interest earned in the period. Transactions in securities other than shares, on the liability side, consist of new securities issuances *less* securities redemptions<sup>16</sup> *plus* accrued interest incurred in the period. Transactions in foreign-currency-denominated securities are converted to domestic currency units at the market exchange rates that prevailed at the times of the transactions.

**5.52** In the accounting systems in many countries, some or all securities other than shares are valued at amortized cost rather than at market or fair value. In the IFRSs, all securities other than shares except for those in the held-to-maturity category are valued at market or fair values (see IAS 39.46), whereas securities classified as held-to-maturity investments are valued at amortized cost using the effective interest rate method.<sup>17</sup> Liabilities in the form of securities other than shares are also valued at amortized cost, except for those designated as financial liabilities at fair value (including at market value) through profit or loss (see IAS 39.47).<sup>18</sup>

**5.53** For the monetary and financial statistics, (1) *stocks of held-to-maturity securities other than shares* and (2) *liabilities in the form of securities other than shares need to be restated at market price or fair value*.<sup>19</sup> It is recommended that the amount

<sup>16</sup>Redemption usually occurs through settlement at maturity, but it can occur through issuers' purchase of their own securities prior to maturity.

<sup>17</sup>The effective interest rate method is described in the subsection *Accrued interest calculations* in this chapter.

<sup>18</sup>Also see Chapter 2 of this *Guide*.

<sup>19</sup>Accounting standards may require disclosure of supplementary data for the market or fair value of securities assets and liabilities that are carried at amortized cost on the balance sheet. IFRS 7.25 states that "Except as set out in paragraph 29, for each class of financial assets and financial liabilities . . . , an entity shall disclose the fair value of that class of assets and liabilities in a way that permits it to be compared with its carrying amount." The exceptions in IFRS 7.29 are those arising when (1) the carrying

of the difference between the amortized cost and restated value of the securities be recorded in *valuation adjustment* within shares and other equity.

### Fair values for infrequently traded securities other than shares

The *fair value* of a financial asset or liability refers to the value that approximates the value that would arise from a market transaction between unrelated parties. (*MFSM*, ¶219)

Two general methods for establishing fair values involve use of either:

- Market prices of financial assets and liabilities that are market traded but otherwise similar to the non-traded **or infrequently traded** financial assets that are being valued; or
- Discounted present values of future cash flows from nontraded **or infrequently traded** financial assets and liabilities. (*MFSM*, ¶220, corrected)

The fair value of a financial asset or liability is calculated as the sum of the present values of all future cash flows, as shown in the following equation:

$$\text{Fair value} = \sum_{t=1}^n \frac{(\text{cash flow})_t}{(1+i)^t} \dots \text{ (MFSM, ¶223, corrected)}$$

[Note: Bolded text has been added for clarification.]

**5.54** Fair value methods need to be applied to the valuation of those securities that are traded infrequently, or are traded only in over-the-counter markets for which market price quotations are not available on a regular basis. This subsection focuses on the valuation of securities that are not impaired, but for which fair values are needed in the absence of market price data. Valuation and other issues pertaining to impaired securities other than shares are covered later in this chapter.

**5.55** An exception to the fair value method may be applicable to securities for which price quotations are available earlier in the reporting period, but not for the end of period. It is recommended that *the earlier price quotation should be applied for end-of-period security valuation, only if the market prices of secu-*

amount of the financial asset or liability approximates the fair value (for example, short-term trade credit) and (2) the fair value of an equity instrument or a discretionary participation feature in an insurance policy cannot be measured reliably. In particular, the data in the disclosures may be useful for revaluing securities other than shares from an amortized cost to a fair value basis in the monetary and financial statistics.

*rities of comparable maturity and credit risk—traded in active markets—have been relatively stable in the intervening period.*

**5.56** In principle, the fair value of securities can be based directly on the market price of similar securities that are actively traded. For the market prices to be directly applicable, the actively traded securities must have the same credit risk and the same future cash flows as the securities for which the fair value is to be estimated. For securities sold on a discount basis, the maturity of the securities would need to approximate those of the similar but actively traded securities. For bonds, the amount and timing of cash flows from coupon payments and redemption of the securities would need to correspond to those of the similar but actively traded securities.<sup>20</sup> In practice, two bonds—one to be valued and the other actively traded—with matching credit risks, cash flows, and maturities may not be found, and the discounted present value method would need to be applied.

**5.57** Calculation of the present value requires data on future cash flows and an appropriate discount rate. Cash flow data are readily available for zero-coupon and fixed-coupon securities, given that the amount and timing of interest payments (for fixed-coupon securities) and the redemption amounts are known. Data on market interest rates (yields) for securities in various classes of credit risk are available for use as the discount rates in the denominators of the present value formulations. The challenging task is to select an interest rate (yield) that is the appropriate representation of the discount rate to be applied to the specific securities that are to be valued.

**5.58** In this *Guide*, the *general recommendation for the discount rate is the pre-tax effective yield (that is, yield to maturity) on actively traded securities for which credit risk and maturity are approximately the same as those of the securities for which the future cash flows will be discounted.* Bond ratings (for example, credit ratings of AAA, AA, B, etc.), even if available for the actively traded securities, are unlikely to be obtainable for the infrequently traded

securities, and a subjective assessment of the relative financial viability of the two securities issuers may need to suffice for establishing that the securities are in the same risk class. It is recommended that a rule be devised to clarify and, if possible, quantify the meaning of “approximately the same maturity” for the active and infrequently traded securities. For example, maturity differences of less than a month for short-term securities, less than six months for medium-term securities, or less than one year for long-term securities might be deemed to satisfy the requirement of approximately the same maturities.

**5.59** The range of securities issued in some countries may be so narrow that the discount rate may need to be represented by the yield on government securities or other actively traded securities that have maturities that are similar to those of, but credit risk that is lower than that of, the securities to be valued. The discount rate can be specified as the yield on the actively traded securities *plus* a premium (for example, 50 basis points, 100 basis points, or more) to account for differences in credit risk. This *Guide* recommends that *the yield on the actively traded securities be used as the discount rate, without adding a risk premium, unless evidence is available to substantiate the estimate of a risk premium.*<sup>21</sup>

**5.60** Present value methods specified in national financial reporting standards are likely to accord with the recommendations in this *Guide* generally, and the data based on these standards can be directly used for the monetary and financial statistics. In particular, the recommendations in this *Guide* are broadly consistent with the discount rate specifications in IAS 36.55, which states that “The discount rate (rates) should be a pre-tax rate (rates) that reflect(s) current market assessments of: (a) the time value of money; and (b) the risks specific to the asset for which the future cash flow estimates have not been adjusted.” Elaborating on the discount rate, IAS 36.56 specifies:

A rate that reflects current market assessments of the time value of money and the risks specific to the asset is the return that investors would require if they were to choose an investment that would generate cash flows of amounts, timing and risk profile equivalent to those that the entity expects to derive from the asset. This rate is

<sup>20</sup>Remaining maturity is the relevant term to maturity. For example, the price of an actively traded bond with ten-year *original* maturity could be used to fair value a bond with a three-year *original* maturity, if the bonds had the same *remaining* maturity and the same future cash flows. However, these bonds would be likely to have different coupon rates and, therefore, different future cash flows.

<sup>21</sup>Issuers of securities should be cautioned against overstating the discount rate, which would result in understating the fair values of liabilities in the form of securities.

estimated from the rate implicit in current market transactions for similar assets or from the weighted average cost of capital of a listed entity that has a single asset (or a portfolio of assets) similar in terms of service potential and risks to the asset under review. However, the discount rate(s) used to measure an asset's value in use shall not reflect risks for which the future expected cash flow estimates have been adjusted.

In this *Guide* (as in the IAS), different types of discount rates are used for the valuation of securities other than shares, shares and other equity, financial derivatives, and other types of assets and liabilities.<sup>22</sup>

**5.61** A more complex approach would be to estimate the present value (that is, fair value) of a bond by applying time-variant discount rates to the future cash flows—that is, by using:

$$\text{Present value:} = \sum_{t=1}^N \frac{(\text{cash flow}_t)}{(1 + i_t)^t},$$

where  $i_t$  denotes the discount rate in period  $t$ , which in general may differ from the discount rate in other time periods. Forward rates could be used as the discount rates,  $i_t$  ( $t = 1, 2, \dots, N$ ), in the present value formula. The forward rates are the rates at various maturities along a *zero-coupon yield curve* (or simply *zero curve*) for which bond yields on a zero-coupon basis have been estimated from the yields of bonds with coupons. This approach is more difficult to implement than the single discount-rate approach because of the data requirements—that is, yields on short-, medium-, and long-term securities in the same risk class as the securities that are to be fair valued—for deriving the time-variant discount rates (that is, forward rates on the zero curve) to be used in the present value equation.

**5.62** IAS 36.A21 states: “An entity normally uses a single discount rate for the estimate of an asset's value in use. However, an entity uses separate discount rates for different future periods where value in use is sensitive to a difference in risks for different periods or to the term structure of interest rates.”

<sup>22</sup>The IAS concept for the discount rate must be sufficiently broad to encompass the estimation of fair values for impaired assets, fair-value hedges, investment property, etc. The weighted average cost of capital of an entity may be applied to discounting cash flows for some types of assets but, in this *Guide*, is not recommended for discounting the future cash flows for securities as recorded in the monetary and financial statistics, because the weighted average cost of capital is firm-specific rather than generally applicable to all investors.

However, it would be expected that a single discount rate, rather than time-variant discount rates, could be used in valuing a security in all circumstances in which an actively traded security of comparable risk and maturity can be identified. The yield to maturity for the actively traded security can be used as the time-invariant discount rate.

**5.63** This *Guide* makes *specific recommendations for the discount rate to use in estimating the fair value (that is, discounted present value) of cross-border holdings of infrequently traded securities other than shares*. For the monetary and financial statistics, the discount rates applied by both the securities holder (creditor) and the securities issuer (debtor) should be effective yields on actively traded securities issued in the debtor country—the economic territory of issuance for the securities to be valued. In the absence of this guidance, debtors and creditors would be inclined to select discount rates that are effective yields on securities issued in their own domestic markets. Given substantial cross-country differences in the level and term structure of interest rates, the use of discount rates based on own-country security yields could lead to fair valuation by the debtor and creditors in the country of issuance that differs substantially from fair valuation by creditors located in other countries. Differences in fair values still would arise even if the discount rate choice were limited to securities yields in the debtor country, given that the debtor and creditors have latitude in choosing the actively traded securities to treat as similar to the securities to be valued. However, differences in the fair values are narrowed by specifying that the discount rate should be the effective yield on securities issued in the domestic market of the debtor.

**5.64** For securities issued for the international money market, the discount rate used in the debtor and creditor's present value calculations should be the yield on similar securities that are actively traded in the international market. However, the need to apply fair value methods should seldom arise, given that market price quotations usually are available for securities traded in international money markets.

### **Perpetuities**

**5.65** Some bonds or similar instruments are *perpetuities*—that is, securities that have no stated maturities, but offer a fixed-coupon payment for

each year (or at some other periodic interval) to perpetuity. The present value (*PV*) of a perpetuity is equal to the cash flow from the coupon payment (*C*) divided by the discount rate (*r*)—that is,  $PV = C/r$ . The recommended discount rate is the effective yield on a conventional bond with a long remaining term (ten years or more) and credit risk similar to that of the perpetuity. Some securities are “perpetuities” in name only, because of the inclusion of call or convertibility options that the issuer most likely will exercise in the foreseeable future. The fair value of such securities is determined in accordance with the approaches used for callable or convertible securities that have stated maturities, utilizing a prediction of when the call or convertibility option will be exercised.

### Variable-rate bonds

**5.66** Variable-coupon bonds and similar securities<sup>23</sup> are one of several types of securities for which future cash flows are uncertain. Features of variable-rate bonds include:

- *Reference rate.* A market interest rate—for example, the London interbank offered rate (LIBOR)—to which the interest rate for the securities is linked.
- *Variable-rate specification.* The relationship between the bond rate and the reference rate—for example, LIBOR plus 2 percent.<sup>24</sup>
- *Reset period.* The frequency (for example, quarterly, semiannually, or annually) and exact dating for the periodic revisions in the variable rate. The bond rate is subject to revision at the beginning of each reset period but, after the reset, remains unchanged for the duration of the reset period.

**5.67** The general recommendation in this *Guide* is that, when future cash flows are uncertain, the fair values for securities should be based on the discounted values of expected cash flows. Estimation of fair values for variable-rate securities requires

<sup>23</sup>These medium- or long-term instruments are given various names—for example, variable-rate or adjustable-rate securities, variable-coupon bonds, floating-rate notes, and capital notes. In the IAS 39.AG33, the variable-rate feature is designated as an embedded derivative that is *closely related* to the economic characteristics and risks of the host instrument.

<sup>24</sup>An add-on risk premium is typical, but multiplicative specifications—for example, LIBOR times 1.05—have been used. A special category is *reverse floating-rate bonds* for which the bond coupon rate is inversely related to the reference rate—for example, 10 percent minus LIBOR.

forecasting of the future levels of the reference interest rate to which the coupon rate on the securities is linked. This *Guide* recommends that *the discount rate for calculating the fair value of these securities should be the effective yield on actively traded securities that have approximately the same credit risk, maturity, and variable-rate features as the securities that are to be valued by the present value method.*

**5.68** Variation in the interest rate often has a relatively minor effect on the fair value of a variable-rate security for which the credit risk has not changed. Suppose the interest rate for a variable-rate security increases along with a general increase in market interest rates. The *cash flows* from the security would increase, but the *discounted cash flows* would increase by much less, if at all, because of the accompanying increase in the *discount rate* based on the now higher effective yield on securities that are actively traded in the higher interest rate environment.

**5.69** Forecasting of the interest payments for variable-rate securities should take into account any *cap*, *collar*, or *floor* imposed on variation in the interest rate (or total interest payments) for the securities.<sup>25</sup> A *cap* imposes an upper limit; a *floor* sets a lower limit; and a *collar* specifies upper and lower bounds on the floating-rate payments. To forecast the future cash flows, it is necessary to predict whether a cap, floor, or collar will become effective and, if so, during which reset periods over the life of the security.

**5.70** Some securities have interest rates that are linked to both a reference rate and the credit rating of the issuer. In forecasting the future cash flow for such securities, it would be necessary to consider the likelihood of a deterioration in the securities issuer’s credit rating, which would lead to an increase in the issuer’s payments during the life of the securities or at maturity. However, credit-rated securities are often traded in active markets and, if so, can be valued on the basis of market price quotations.

<sup>25</sup>In the context of financial derivatives, a *cap* is a stand-alone type of call option on interest rates, and a *floor* is a stand-alone type of put option on interest rates. *Collar* also can refer to an investment strategy through which securities and options contracts are combined to establish lower and upper bounds on the future value of the entire portfolio.

**Securities with embedded derivatives (not closely related to the host securities)<sup>26</sup>**

**5.71** Embedded derivatives take a multitude of forms, ranging from some types that can be characterized as “exotic” to others that are relatively common. Among the most prevalent types are:

- *Call option.* The right of early redemption of the securities at the option of the securities issuer.
- *Put option.* The right of early redemption of the securities at the option of the securities holder.
- *Conversion option.* The right to exchange the securities for a specified number of equity shares of the corporation that issued the securities. Conversion may be at the option of the securities holder or, less often, at the option of the securities issuer.<sup>27</sup>
- *Interest/principal indexation.* Linkage of the amount of future cash flows—interest payments and/or principal repayments on the securities—to a market price variable such as a commodity price index, a general price index (for example, consumer price index), an equity price index, or some other market price variable.

This *Guide* recommends that *the host security and the embedded derivative should be valued in accordance with the national financial reporting standards, even if the accounting standards specify that the underlying security component and the embedded derivative are to be valued and recorded separately. The total value of the securities, inclusive of the values of the embedded derivatives, should be recorded as a single instrument within securities other than shares, regardless of the national financial reporting standards for valuation and asset classification.* Taken together, these recommendations preserve the classification of an embedded derivative as inseparable from the host instrument, while providing flexibility for the valuation.

**5.72** The IFRSs stipulate that the host security and the embedded derivative components are to be classified separately in the accounts, if the embedded derivative is not closely related to the host securities. Therefore, separate valuations for the host

<sup>26</sup>See Chapter 4.

<sup>27</sup>Conversion to equity shares at the option of the security holder often is combined with a security call option that can be exercised by the security issuer. If the issuer exercises the call option, the security holder is entitled to convert the security to equity within a specified period (for example, a month). This mechanism—called *forced conversion*—is the most common type of convertibility available to issuers.

securities and the embedded derivatives are required. IAS 32.31–32 contains some general guidance on the valuation of a compound instrument with liability and equity components—in particular, for the valuation of securities that are convertible to equity shares at the option of the holder. IAS 32.31 states (in part):

Equity instruments are instruments that evidence a residual interest in the assets of an entity after deducting all of its liabilities. Therefore, when the initial carrying amount of a compound financial instrument is allocated to its equity and liability components, the equity component is assigned the residual amount after deducting from the fair value of the instrument as a whole the amount separately determined for the liability component. The value of any derivative features (such as a call option) embedded in the compound financial instrument other than the equity component (such as an equity conversion option) is included in the liability component. The sum of the carrying amounts assigned to the liability and equity components on initial recognition is always equal to the fair value that would be ascribed to the instrument as a whole. No gain or loss arises from initially recognizing the components of the instrument separately.

**5.73** This approach applies only to a situation in which the total value of the compound instrument is known, because either a market price quotation is available or the compound instrument is a new issue for which the original issue price is the current price. The approach is designed for the estimation of separate values for the host and embedded derivative component, which though proscribed in the IFRSs, is not required in the methodology of this *Guide*, given that an embedded derivative is not classified separately from the host instrument.

**5.74** *A composite valuation approach*—that is, a single-step method for estimating the total values of securities (that is, inclusive of the embedded derivatives components)—is described in this section. A major advantage of the composite valuation approach is its compatibility with the method for estimation of accrued interest on securities with embedded derivatives, as recommended later in this section.

**5.75** *Creditor estimation of fair values for securities that are callable at the option of the issuer.* The creditor must predict if the securities will be called and, if so, whether the call will occur on or after the call date. *If market interest rates have declined apprecia-*

bly since the securities were issued<sup>28</sup> (or are expected to fall significantly in the period up to the call date for the securities), it is recommended that the fair value be based on the presumption that the securities will be called—that is, a fair value given by the sum of the discounted values of the coupon payments up to the call date, the repayment at call, and the call premium.<sup>29</sup> If market interest rates have risen (or are expected to rise) appreciably prior to the call date, the fair value of the securities should be based on the discounted value of the future cash flows over the full term to maturity for the securities—that is, by presuming that the securities will not be called. The recommendation for the discount rate is the effective yield on similar but actively traded callable securities, if identifiable, or actively traded non-callable securities for which the remaining term to maturity is approximately the same as the period up to the call date for the securities to be valued, if call is expected, or the full maturity for the securities to be valued, if call is not expected.

**5.76** *Debtor (issuer) estimation of fair values for securities that are puttable at the option of the creditor.* The principles are the same as those for a creditor's valuation of callable securities. The debtor must predict whether the put option will be exercised. If market interest rates have increased substantially since the securities were issued (or are expected to rise in the period leading up to the put date), estimation of the fair value can be based on the presumption that the securities will be put, and the fair value can be estimated as the sum of the discounted values of the coupon payments up to the put date, the repayment due on the call date, and the put premium, if any. If market interest rates have fallen (or are expected to decline) appreciably prior to the put date, it is recommended that the fair value of the securities be based on the discounted value of the future cash flows over the full term to maturity for the securities—that is, by presuming that the securities will not be put. The recommendation for the dis-

count rate is the effective yield on similar but actively traded securities with a put option, if identifiable, or actively traded securities with no put option and for which the remaining term to maturity is approximately the same as the period up to the put date for the securities to be valued, if put is expected, or the full maturity for the securities to be valued, if put is not expected.

**5.77** Fair valuation of callable securities is easier for the securities issuer that controls the exercise of the call option. Similarly, fair valuation of securities with a put option is easier for the securities holder. Even so, the holders of the embedded options may be undecided about if and when the call or put option should be exercised, and therefore may also need to predict the amount and timing of the future cash flows.

**5.78** *Estimation of fair value for securities with indexed interest and/or principal.* Both the creditor and debtor must estimate the future cash flows, as determined by the indexation, and must select an appropriate discount rate. Suppose the security contract calls for future coupon payments and principal repayment that are indexed to the growth rate of the consumer price index or, alternatively, a commodity or equity price index. The growth rate for the index variable would need to be forecast for estimating the stream of expected interest and principal payments. This Guide recommends that, if possible, the discount rate for calculating the fair value of these securities should be the effective yield on actively traded securities that have approximately the same credit risk, maturity, and indexation features as the securities that are to be valued. Identification of actively traded securities with the same type of indexation, as well as the same maturity and credit risk, may not be possible. Use of the effective yield on nonindexed securities with maturity and credit risk similar to those of the fair-valued securities is acceptable, if actively traded securities with more closely matching characteristics cannot be identified.

**5.79** Securities with interest and principal that are indexed to an exchange rate are a special category. These securities often have future cash flows that are the same as those for foreign-currency-denominated securities, when the cash flows are translated into the same currency. *Currency-A-denominated securities linked to Currency B* through the exchange-rate indexation of principal and interest are equivalent to

<sup>28</sup>If the market price of the securities exceeds the call price (typically, the par value plus a call premium), the call option usually is exercised. If a market price quotation is unavailable, judgment must be applied in deciding if a decline in market interest rates is expected to be sufficient for the securities value to be above the call price as of the call date. Similarly, judgment must be used in predicting if the decline in market rates will lead to exercise of a put option in a security contract.

<sup>29</sup>A call premium, if applicable, is often stated as one or more coupon payments that the issuer is obligated to pay in exercising the call.



*Currency-B-denominated securities.* Such indexed securities should be classified as foreign-currency-denominated securities (that is, securities denominated in Currency B), and the accounting rules for securities denominated in foreign currencies should be applied.<sup>30</sup>

### Preferred stock

Preferred stocks or shares that pay a fixed income but do not provide for participation in the distribution of the residual value of an incorporated enterprise on dissolution are included in this category [securities other than shares]. (MFSM, ¶136)

**5.80** Fair values for preferred shares are estimated by the methods described above for corporate bonds, taking into account that preferred stock may have some cash flow characteristics that are not associated with bonds. Preferred stock offers fixed (or sometimes variable) dividends that are similar to bond coupon payments, with one major exception. Whereas the schedule for bond coupon payments is predetermined, the timing of dividend payments on preferred shares may be at the discretion of the issuer,<sup>31</sup> subject to the requirements that skipped dividend payments are cumulative and that all accumulated dividends on preferred shares must be paid before the corporation is entitled to declare a dividend on common shares. Some preferred shares do not have a final repayment date; others have a retirement date, or option for repurchase (that is, call option) at a specified share price, or an option for conversion into a specified number of common shares.

<sup>30</sup>This recommendation is consistent with IAS 39.AG33(c), which states that “an embedded foreign currency derivative that provides a stream of principal or interest payments that are denominated in a foreign currency and is embedded in a host debt instrument (for example, a dual currency bond) is closely related to the host debt instrument. Such a derivative is not separated from the host instrument because IAS 21—*The Effects of Changes in Foreign Exchange Rates* requires foreign currency gains and losses on monetary items to be recognised in profit or loss.” Such gains or losses are valuation changes, not interest income/expense resulting from indexation.

<sup>31</sup>The recommendation in this *Guide* is that *preferred shares be classified as securities other than shares unless preferred shares convey a right to residual value upon liquidation of the issuing firm*. This recommendation is consistent with IAS 32.18(a) which states that “a preference share [that is, preferred share] that provides for mandatory redemption by the issuer for a fixed or determinable amount at a fixed or determinable future date, or gives the holder the right to require the issuer to redeem the instrument at or after a particular date for a fixed or determinable amount, is a financial liability [rather than equity].”

**5.81** To estimate the fair value of preferred shares, assumptions are needed concerning whether dividends will be paid as scheduled or will accumulate and, where applicable, if and when the preferred shares are likely to be called or converted into common shares. *The recommendation is to assume that dividends will be paid on schedule unless skipped dividends are already present and appear likely to persist, or objective information—for example, expectation of weak or negative earning performance of the preferred-share-issuer corporation—indicates that preferred stock dividends are likely to be skipped.* If dividends have accumulated (or are likely to accumulate), the amount and timing of the expected cash flows from the eventual payment of the dividends need to be predicted. *The recommendation for the discount rate to be applied to the expected cash flows is the effective yield on actively traded preferred shares that are deemed to have the same credit risk and about the same expected maturity as the preferred shares to be valued. If necessary, however, the discount rate can be specified as the effective yield on actively traded corporate bonds that are of comparable credit risk<sup>32</sup> and have a maturity that approximates the expected term to maturity, call, or conversion of the preferred shares.*

**5.82** Preferred stock that has no stated maturity and no embedded call or convertibility options is similar to a bond that is a perpetuity. The fair value of the preferred stock is given by the present value (PV) of the stream of cash flows (C) from the dividends to be paid over an infinite horizon—that is,  $PV = C/r$ , where  $r$  is the effective yield on similar but actively traded preferred shares<sup>33</sup> or, if necessary, on actively traded long-term bonds.

### Mortgage pass-through securities

**5.83** Forecasting the future cash flows from pools of mortgage pass-through securities is a relatively complex task because of the inherent uncertainty about the future repayment of mortgage loans in a

<sup>32</sup>The discount rate can be specified as the effective yield on the corporate bonds without adjusting for differential credit risk, even though preferred shareholders’ claims are usually subordinated to those of bondholders.

<sup>33</sup>The discount rate ( $r$ ) is the yield to maturity, which is equal to  $C/M$ , where  $C$  is the annual cash flow (dividend) and  $M$  is the market price for the actively traded preferred stock.

pool.<sup>34</sup> The FCs that securitize mortgage loan pools and issue the pass-through securities use sophisticated models for the initial pricing and ongoing valuation of these securities, taking into account the expected prepayments. FCs that issue, trade, or deal in pass-throughs have developed various empirical models for estimating the prepayments and valuing the pass-through securities. The best-known models include:<sup>35</sup>

- *PSA model.* An empirical prepayment model developed by the Public Securities Association (PSA)—a trade organization of brokers, dealers, and underwriters—and using current and past data to estimate the average rates of monthly prepayment for specific types of mortgage loan pools.
- *Proprietary PSA-type models.* FCs that issue, trade, or deal in pass-through mortgage securities have developed their own in-house models for estimating prepayments.
- *Options-pricing models.* Based on options-pricing theory, these models treat the prepayments as equivalent to the exercise of a call option—an option written by the holders of the pass-through securities and owned by the debtors (mortgagees).<sup>36</sup> The estimated yield on the mortgage pass-through securities is the sum of the yield on securities that are otherwise similar, but not subject to prepayments, plus the estimated yield on the “call option” that was “written” (that is, provided) by the pass-through securities holders.

**5.84** The FCs that originate and sell the pass-through securities are responsible for providing a monthly statement that shows the current value of the investor’s holdings of pass-through securities and the related cash flows—the interest payments and principal repayments (including prepayments) for the reporting period. The opening stock (*OS*) and closing stock (*CS*) are obtained directly from the monthly statements; transactions (*T*) are recorded in the amount of the principal payments shown on the

statement;<sup>37</sup> and the valuation change (*VC*) is shown on the statement or is residually derived such that  $VC = CS - OS - T$ .

### Stripped securities

**5.85** An FC sometimes purchases bonds or similar instruments, *strips* the coupon payments, and sells the future cash flows to separate investors—that is, the claim on the principal is sold to one set of investors, and the claim on the coupon payments is sold to other investors.<sup>38</sup> The FC records liabilities (classified as securities other than shares and subclassified by economic sector of the holder) for the cash flows that the FC stripped and sold. Alternatively, the strips can be created at the initiative of the securities issuer.<sup>39</sup> FCs are purchasers, as well as creators, of strips—that is, the coupon-only and principal-only securities. The principal and the periodic coupon payments are transformed into a series of zero-coupon bonds, with maturities matching the redemption date for the principal and the coupon payment dates. Market price quotations for the strips may be available, or the strips may need to be valued by the present value method. *The recommended discount rates for applying the present value method are the effective yields on actively traded zero-coupon securities that have maturities that approximately match those of the coupon-only and principal-only securities.*

**5.86** Determination of fair value using the present value method should be possible for nearly all types of securities other than shares. However, contractual terms of some securities may be so complex (for example, with respect to multiple embedded

<sup>34</sup>Mortgage-backed securities and related instruments—in particular, mortgage pass-throughs, collateralized mortgage obligations (CMOs), and mortgage pass-through “strips”—are described in Chapter 4.

<sup>35</sup>These models are described in Saunders and Million (2003), Chapter 28, “Securitization.”

<sup>36</sup>Prepayment is tantamount to repurchase of the mortgage loan by the debtor (mortgagee). In the absence of a prepayment penalty, the “strike price” in the call option is the amount of the outstanding principal of the mortgage loan.

<sup>37</sup>Accrued interest would need to be estimated for inclusion in transactions, if the payment schedule for principal and interest were quarterly or did not correspond to calendar-month accounting and reporting periods.

<sup>38</sup>The strips can be created such that the original securities issuer’s liability for the unstripped securities is replaced by a liability for the stripped coupons and principal, or the security issuer retains the liability for the unstripped securities but the FC creating and selling the strips assumes liabilities to the holders of the stripped coupons and principal. In the latter case, the FC shows liabilities—that is, obligations to the purchasers of the stripped coupons and principal—as well as continuing to show the asset represented by the issuer’s continuing obligation for the original securities. Within securities other than shares, the liabilities are recorded in the subcategories that are based on the residency and economic sector of the holders of the stripped coupons and principal. See *Coordinated Portfolio Investment Survey Guide*, second edition (IMF, 2002), pp. 29–30.

<sup>39</sup>On the creation of strips and the statistical accounting, see International Monetary Fund (2002).

derivatives features) that reasonable estimation of future cash flows and/or selection of a representative discount rate is impossible. It is recommended that *these securities should be valued at acquisition price or amortized cost (if calculable). Alternatively, the securities should be reclassified as loans, given that their complex (possibly unique) contractual terms raise questions as to whether the securities would ever be traded and therefore truly negotiable instruments.*<sup>40</sup>

### Impaired securities

**5.87** Securities other than shares are deemed to be impaired if the creditor has reliable information that the debtor may renege on the obligation to pay the interest and principal in accordance with the schedule of future cash flows for the securities. The accounting treatment for impaired securities depends on the extent of impairment—that is, on whether the debtor is expected to default on all future payments, or is expected to meet only some of the future payment obligations (either as scheduled or on a late payment basis). If the creditor expects the debtor to default on all future payments, the security is referred to as a *bad debt*, a term also applied to other financial assets—loans, deposits, financial derivatives, and other accounts receivable on which the debtor is expected to default.

**5.88** This *Guide* provides alternative treatments of impaired securities. The recommended approach is to *reclassify the securities as a loan*, given that securities that are expected to be uncollectible cannot be sold through normal market channels and therefore have ceased to qualify as negotiable instruments. After reclassification as nonperforming loans (NPLs), the expected losses are included in provisions for loan losses, and eventually are reflected in loan write-offs.<sup>41</sup> When reclassified from securities, the loan should be valued, if possible, at book value—the valuation method for all loans.

**5.89** An alternative approach is to continue to classify the uncollectible claims as securities and use accounts that are separate from, but parallel to,

<sup>40</sup>IAS 39.54 recognizes that, in rare circumstances, the fair value of a financial asset may not be obtainable and, in such cases, recommends that valuation be based on amortized cost.

<sup>41</sup>Provisions for loan losses and loan write-offs are covered in ¶5.128–5.129 of this chapter.

accounts for uncollectible loans—that is, separate accounts for provisions for securities losses and specific entries for securities write-offs.<sup>42</sup> Flows arising from provisions for securities losses and securities write-offs should be entered as OCVA, as in the case of loan loss provisions and write-offs. However, provisions for securities losses should be deducted from the total holding of securities issued by an economic sector, thereby reflecting the realizable value of the securities holdings.<sup>43</sup>

**5.90** Securities may be deemed to be impaired, even though some future cash flow is expected to be provided by the securities issuer. Impairment is often based on information that the creditor receives about significant financial difficulties of the securities issuer, delinquency of issuer payments, potential bankruptcy of the issuer, or other evidence.<sup>44</sup> Valuation of impaired securities by the present value method is fraught with uncertainty.<sup>45</sup> The future cash flow(s) must be estimated, even though the cash flows are highly uncertain with respect to both amount and timing. The discount rate for computing the fair value (that is, present value) of the impaired securities, in principle, can be either a measure of the creditor's weighted-average cost of capital (that is, funds), the creditor's incremental borrowing rate, or some other market borrowing rate. Although subjectivity and imprecision are inherent to estimation of the fair value of impaired securities, the present value method should be applied conservatively to avoid, to the extent possible, creditor overstatement of fair value.

<sup>42</sup>This recommendation is a practical alternative for countries in which the accounting system already has separate accounts for provisions for losses on securities.

<sup>43</sup>The netting of provisions for securities losses contrasts with the recording of loans, which are always shown at book value without the deduction of provisions for loan losses.

<sup>44</sup>Disappearance of an active market for securities or lowering of the credit rating of the issuer do not necessarily imply impairment. As indicated in IAS 39.60, "The disappearance of an active market because an entity's financial instruments are no longer publicly traded is not evidence of impairment. A downgrade of an entity's credit rating is not, of itself, evidence of impairment, although it may be evidence of impairment when considered with other available information."

<sup>45</sup>In some cases, over-the-counter price quotations may be available, if a specialty market exists for the purchase of impaired securities at prices that are heavily discounted from their pre-impairment prices. It may be possible to locate an over-the-counter market in which the securities can be sold—for example, at 10 percent or 20 percent of the face value or pre-impairment value of the securities.

**5.91** The difference between the pre- and post-impairment values represents an expected holding loss on the securities. The outstanding amount of the securities can be calculated by direct deduction of the expected holding loss from the pre-impairment value of the securities or through the use of a provision for securities loss. Using the latter approach, the outstanding amount of the securities is equal to the pre-impairment value of the securities *less* the provision for securities loss.<sup>46</sup> For either approach, the contra-entry for the expected holding loss is recorded as an expense in the profit or loss accounts.

### Accrued interest calculations

Common types of securities are those sold on

- a *coupon basis*, stipulating that periodic interest, or coupon, payments will be made during the life of the instrument and that the principal will be repaid at maturity;
- an *amortized basis*, stipulating that interest and principal payments will be made in installments during the life of the instrument;
- a *discount*, or *zero coupon*, *basis*, whereby a security is issued at a price that is less than the face (or par) value of the security, and all interest and principal are paid at maturity;
- a *deep discount basis*, whereby a security is issued at a price that is less than face value, and the principal and a substantial part of the interest is paid at maturity; and
- an *indexed basis*, which ties the amount of interest and/or principal payment to a reference index such as a price index or an exchange rate index. (MFSM, ¶135)

One method for calculating the amount of accrued interest is relatively easy to apply . . . Let  $L$  denote the issue price of the security, representing the amount of funds that the purchaser (creditor) provides to the issuer (debtor) and measuring the original value of the liability incurred by the issuer. Let  $F$  denote the face value of the security, representing the sum paid to the creditor when it matures. The difference,  $F - L$ , is the discount on the security that represents interest accruing over the life of the security. For securities sold on a discount basis,  $F - L$  represents the total accrued interest to be distributed equally (in terms of effective yield rather than absolute amount) over the periods prior to maturity. . . . This method for calculating the amount of accrued interest is called the *debtor approach*, but it can be

<sup>46</sup>In contrast to the book-values shown for loans, the amount is *net* of the provision for loss.

applied relatively easily by both the debtor and creditor in recording the accrued interest for securities **that the creditor holds from the time of issuance to maturity.** (MFSM, ¶231, revised)

Calculation of accrued interest for . . . securities **that have been traded in the secondary market** is less straightforward, and a consensus has yet to be reached on the appropriate international guidelines in this area. One method is to apply the debtor approach, in the same manner as described above. . . . An alternative method—called the *creditor approach*—is based on the calculation of accrued interest from the perspective of a party who has purchased securities in the secondary market. Let  $P$  denote the price paid for the securities in the secondary market.  $P$  (rather than  $L$  as described above) represents the amount of funds provided from the secondary market purchaser's perspective, and  $F - P$  is viewed as the discount that is to be apportioned as accrued interest.

**Suppose the market prices of the securities in succeeding months are  $P_1, P_2, P_3$ , etc. In these periods,  $F - P_1, F - P_2, F - P_3$ , etc. is viewed as the discount that is to be apportioned (on an effective yield basis) as accrued interest.** (MFSM, ¶232, revised)

Practical considerations are also important. The secondary-market purchasers' lack of information on the amounts of funds provided to the debtors is an obstacle to the application of the debtor approach by such purchasers. It should be emphasized, however, that the debtor and creditor approaches converge as the changes in market price during the life of a security become smaller. In the absence of major shifts in market interest rates and security prices, application of the debtor and the creditor approach, respectively, will lead to relatively small differences in the amounts of accrued interest recorded by the two parties. However, the differences may be pronounced when market interest rates and security prices are subject to large movements. (MFSM, ¶235)

[Note: The bolded text does not appear in the MFSM and has been added for clarification.]

**5.92** The accrued interest on a zero-coupon security is based on the effective interest rate (level yield to maturity), which is calculated directly from the market price, term to maturity, and face value (that is, redemption value) of the security.<sup>47</sup> In IAS 39 and many national financial reporting standards, accrued interest is calculated by using the *debtor approach* or

<sup>47</sup>The *effective interest rate*, or effective yield, is sometimes called the *level yield to maturity* or to the next repricing date. The *next repricing date* is relevant for the calculation of the effective yield on variable-rate securities.

the *acquisition approach*. In national financial reporting standards, the debtor approach is used by securities issuers, as well as by securities holders who purchase securities at the time of origination by the issuer. Under the debtor approach, the effective interest rate (and therefore the calculation of accrued interest) is based on the market price of the securities at the time of issue. Under the acquisition approach, the effective interest rate is based on the market price of the securities at the time of purchase in the secondary market.

**5.93** The *creditor approach*—a third method for accrued-interest calculation—is an approach that has been recommended for macroeconomic statistics, rather than having been endorsed in the IFRSs or national financial reporting standards. Under the creditor approach, the effective interest rate for calculating the accrued interest in each period is based on the market price of the securities in the particular period.

**5.94** The properties of the effective interest rates obtained by the debtor, acquisition, and creditor approaches are:

- Debtor approach. *The effective interest rate*<sup>48</sup> is based on (1) the issue price, (2) the term to maturity, and (3) the redemption value of the security. A single effective yield, established at the time of security issuance, is used to calculate the amount of accrued interest in each period to maturity.
- Acquisition approach. *The effective interest rate is based on (1) the market price of the security at the time of purchase ( $P_1$ ), (2) the term to maturity at the time of purchase, and (3) the face value of the security.* Using either the acquisition or creditor approach, the first-period effective interest rate,  $R_1$ , depends on  $P_1$ . However, under the acquisition approach, the effective interest rate remains at  $R_1$  in the second and subsequent periods, if the security continues to be held by the same owner. The effective interest rate will change only if the security is resold in the secondary market. Assuming that the new purchaser also uses the acquisition approach, the new effective interest rate will be determined by (1) the security price paid by the new purchaser, (2) the new term to maturity, and (3) the face value of the security.

<sup>48</sup>The *effective interest rate* is defined in IAS 39.9 as “. . . the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial instrument or, when appropriate, a shorter period to the net carrying amount of the financial asset or financial liability.”

- Creditor approach. *A series of effective interest rates (denoted by  $R_1, R_2, R_3$ , etc.), which apply to successive periods over the remaining life of the security, is calculated on the basis of the (1) security prices (denoted by  $P_1, P_2, P_3$ , etc.) for the respective periods, (2) the remaining terms to maturity, and (3) the redemption value of the security.* The effective interest rate for calculating the accrued interest varies with period-to-period changes in the market price (or fair value) of the security. For the first period, the effective interest rate ( $R_1$ ) depends on the first-period market price or fair value ( $P_1$ ); for the second period, the effective interest rate ( $R_2$ ) depends on  $P_2$ ;  $R_3$  depends on  $P_3$ ; etc.

**5.95** Many countries’ accounting standards for accrued interest on securities other than shares contain a combination of the debtor and acquisition approaches. In IAS 39, accrued interest on securities holdings is based, in effect,<sup>49</sup> on either the debtor approach or the acquisition approach, depending on whether the securities were acquired when issued or later in the secondary market. In IAS 39 and the national financial reporting standards in many countries, accrued interest on securities issued (liabilities) is based, in effect, on the debtor approach, which is consistent with the methodology for the national account statistics as contained in the 1993 SNA.

**5.96** Bonds and similar instruments<sup>50</sup> pay a fixed or variable amount of coupon payment, typically payable semiannually but sometimes monthly. At the time of issuance, bonds may be priced at par (at face value), below par (at a discount), or above par (at a premium). A bond issued at par usually sells at a discount or premium in the secondary market, depending on whether the market interest rates (and, therefore, yields on newly issued bonds) have risen or declined since the bonds were issued.

**5.97** Accrued interest on a bond for which the current market price or fair value is below the face value has two components: appreciation in the market price of the bond, which moves toward the face value that will be paid at maturity, and accumulation of coupon earnings, which continuously accrues in the period (typically, six months) between coupon payments.

<sup>49</sup>*Debtor approach* and *acquisition approach* are terms that are not used in the IAS or national financial reporting standards.

<sup>50</sup>For example, large-denomination negotiable certificates of deposit and preferred stock that does not entitle the holder to a claim on the residual value of the issuer firm.

**5.98** For a fixed-coupon bond or similar security issued at face value (that is, at the redemption value, or par), the accrued interest can be calculated (under the debtor approach) by prorating the coupon on a daily basis—total coupon *divided* by number of days in the coupon period—and by multiplying the daily prorated coupon by the number of days of accrual in the reporting period.<sup>51</sup>

**5.99** For a fixed-coupon bond issued at a discount from the face value, accrued interest can be calculated as the accrued coupon *plus* the amortization of the discount. The accrued coupon for a reporting period is calculated in the same way as the accrued coupon for a fixed-rate bond sold at par. Amortization of the discount is based on the  $r$  value that satisfies the following equation:

$$\text{Issue price} = \frac{\text{Face value}}{(1 + r)^D},$$

where  $D$  is the number of days over the life of the bond.<sup>52</sup> Having solved for  $r$  (on a daily basis), the amortization amount for each day over the life of the bond is calculated, and the daily amortizations for the reporting period are summed.

**5.100** For a fixed-coupon bond issued at a premium over the face value, accrued interest can be calculated as the accrued coupon *minus* the amortization of the premium.<sup>53</sup> The accrued coupon for a reporting period is calculated in the same way as the accrued coupon for a fixed-rate bond sold at par.

**5.101** For a variable-rate bond or similar security issued at face value, the accrued coupon can be calculated by taking into account that the coupon rate, though variable between coupon periods, is reset at the beginning of each coupon period and remains

unchanged throughout the coupon period.<sup>54</sup> The accrued coupon for a reporting period is the prorated (time proportion) share of the coupon earnings for the period *less* any coupons that became due for payment during the reporting period. Suppose an entire reporting period were within a particular coupon period. The accrued coupon earnings for the reporting period would be a prorated share of the coupon. Alternatively, suppose the first coupon period ended after  $n_1$  days of the reporting period, and a different coupon rate applied for the second coupon period, extending through the remaining  $n_2$  days of the reporting period (and into subsequent reporting periods). The accrued coupon for the reporting period is an  $n_1$ -day share of the first coupon *plus* an  $n_2$ -day share<sup>55</sup> of the second coupon *minus* the first coupon payment.

**5.102** For a variable-rate bond issued at a discount (or premium), accrued interest can be calculated as the accrued coupon *plus* the amortization of the discount (or *minus* the amortization of the premium). The amortization of the discount (or premium) for variable-rate securities is the same as for fixed-coupon securities.

Interest and principal payments for some deposits, loans, and securities are indexed to changes in prices. The indexation links the amount of interest and/or principal to changes in an index of the general price level, the price of a specific commodity, share prices, or exchange rates. (MFSM, ¶215)

This manual and the 1993 SNA recommend treating all changes in the amounts of interest and principal arising from indexation as additional interest. It recommends treating amounts arising from indexation of the principal as interest that is reinvested in the financial asset. That is, the indexation of principal results in a property income flow accompanied by a *financial transaction*—in other words, the reinvestment of the income flow—that augments the outstanding principal. In particular, the increase in principal arising from the indexation should be treated as a transaction rather than as a revaluation. (MFSM, ¶215)

<sup>51</sup>If no coupon payment falls due during the reporting period, the number of days of accrual is equal to the number of days in the reporting period. If a coupon is paid during the reporting period, the number of days of accrual is equal to the number of days between the time of the coupon payment and the end of the reporting period.

<sup>52</sup>The amortization rate,  $r$ , could be calculated as a monthly rate (monthly compounded), a quarterly rate (quarterly compounded), a semiannual rate (semiannual compounded), or an annual rate (annual compounded). However, amortization at a daily rate (based on daily compounding) facilitates the allocation of the discount amortization to the individual reporting periods.

<sup>53</sup>The treatment is consistent with the IAS concept of interest revenue as derived from the application of the effective interest method which, as indicated in IAS 39.AG65, takes into account the amortization of any discount or premium—that is, the difference between the purchase price and the amount at maturity for a security.

<sup>54</sup>The resetting of the coupon may be affected by an embedded derivative such as a rate cap, collar, or floor. If so, the amount of the new coupon rate, though affected by the embedded derivative, is still known at the beginning of the coupon period when the rate is reset, and accrued interest calculations are not further complicated.

<sup>55</sup>The shares are based on time proportions of  $n_1/p_1$  for the first coupon period and  $n_2/p_2$  for the second coupon period, where  $n_1$  and  $n_2$  are the number of calendar days in the first and second segments of the reporting period, and  $p_1$  and  $p_2$  are the total number of calendar days in the first and second coupon periods.

**5.103** For securities with indexed interest and/or principal, the accounting for accrued interest follows the same principles as those for accrued interest on variable-coupon securities. At regular periodic intervals, the coupon rate and/or principal are reset in response to movements in the reference index—that is, the commodity price index, share price index, etc. The amount of the coupon—revealed at the beginning of the coupon period when the coupon is reset—is prorated for inclusion in the accrued interest for the reporting period. The entire increase or decrease in principal that results from indexation that is reset at regular intervals should be included in the accrued interest for the reporting period in which the principal resetting took place.<sup>56</sup>

**5.104** For securities with embedded derivatives such as call, put, or equity conversion options, the accounting for accrued interest is the same as for securities that do not have such features. For all periods leading up to the exercise of the option, the interest accrual is unaffected by the presence of the option. When the embedded option is exercised, the securities are redeemed, and accrual of interest—both coupon flow and amortization of discount or premium—ceases.

**5.105** In the secondary market, a bond has two prices—the so-called *clean price* and *dirty price*, which are market prices that exclude and include, respectively, the part of the coupon that has accrued up to the time of purchase in the secondary market. The creditor (that is, secondary-market purchaser) records the *dirty price* as the acquisition cost of the bond. When the coupon is paid, the accrued interest that was included in the dirty price (that is, acquisition cost) is recorded in the creditor's accounts as a recoupment of acquisition cost, rather than as an interest payment.<sup>57</sup>

**5.106** For securities purchased in the secondary market, national financial reporting standards may stipulate that the effective yield, which is used to calculate accrued interest, should be based on the

redemption value, remaining coupon payments, remaining term to maturity, and *dirty price* at which the securities were purchased in the secondary market—that is, based on the *acquisition approach*. Similar calculations would apply if the *creditor approach* were implemented, except the effective yield would be recalculated for each reporting period, using the current market price (dirty price) as of the end of each period, rather than continuing to use the price at which the securities were acquired in the secondary market.

**5.107** In applying the acquisition or creditor approach, the accrued coupon revenue for securities purchased in the secondary market can be prorated in the same manner as was described for securities acquired at the time of issue. However, the amortization of the discount (or premium) by the acquisition or creditor approach may differ significantly from the amortization by the debtor approach—in particular, if market interest rates and security prices have changed appreciably between time of issuance and the time of purchase in the secondary market.

**5.108** Using the acquisition approach, the discount or premium included in the secondary-market purchase price—rather than the discount or premium in the issue price—is amortized for inclusion in accrued interest. Using the creditor approach, the accrued coupon and the amortization of discount or premium are not calculated separately. The effective yield for the securities—updated (that is, recalculated) in each period—is used to compute the accrued interest for the reporting period, thereby taking into account both coupon accrual and the amortization of any discount or premium that is reflected in the current market price.

#### Accrued interest reporting

**5.109** This *Guide* makes separate recommendations for the data on accrued interest in the *monetary statistics* and the *financial statistics*, respectively. The recommendations are:

- Monetary statistics. *The accrued interest data that are recorded within the accounting systems of the FCs should be reported on a monthly basis for DCs, and on a quarterly basis for OFCs.* The accounting standards in some countries may apply the debtor approach to the calculation of accrued interest on all securities holdings (assets) and all securities issuances (liabilities) of FCs, or

<sup>56</sup>Special treatment applies to securities for which the principal is indexed to an exchange rate. Increases or decreases in principal, arising from the indexation, are recorded as valuation changes.

<sup>57</sup>In IAS 18.32, the general principle is stated as follows: “When unpaid interest has accrued before the acquisition of an interest-bearing investment, the subsequent receipt of interest is allocated between pre-acquisition and post-acquisition periods; only the post-acquisition portion is recognised as revenue.”

may apply the creditor or allocation approach to some categories of securities holdings, and the debtor approach to other categories. Whatever accrued-interest data are included in the FC's accounts should be reported for the monetary statistics.

- Financial statistics. *The accrued interest data that are recorded within the accounting system of the FCs should be reported on a quarterly basis. The accounting data that have been compiled in accordance with the debtor approach can be reported directly for use in the financial statistics. The accounting data that have been compiled in accordance with the creditor or allocation approach also need to be reported, but accompanied by supplementary data for financial statistics compilers' use in adjusting the accrued interest data to the debtor approach in accordance with the 1993 SNA methodology.*

**5.110** Supplementary data reporting is recommended in lieu of requiring that an FC attempt to make the accrued-interest adjustments for securities purchased in the secondary market. FCs would find it difficult to estimate accrued interest by the debtor approach, which is based on the original yield to maturity of each security. A security holder knows the price at which the security was purchased in the secondary market, but is unlikely to know the original price when issued—the price needed for calculating the original effective yield that is used in the debtor approach. *It is recommended that, using the reported supplementary data, the financial statistics compilers be responsible for obtaining (or estimating) the issue prices for the securities and calculating the accrued interest by the debtor approach.*

**5.111** Ideally, supplementary data would be reported on a security-by-security basis for all securities for which the allocation or creditor approach had been applied in the accounting data. This approach could be implemented easily for an FC that held only a few securities purchased in the secondary market. However, large FCs' portfolios may contain hundreds of securities that were acquired in the secondary market. It is recommended that supplementary data be provided for only those securities for which the accrued-interest adjustment arising from recalculation by the debtor approach would be appreciable—primarily, for zero-coupon and deep-discount bonds that had been outstanding for significant

periods prior to being purchased in the secondary market.<sup>58</sup>

**5.112** The supplementary data for each security would include the (1) identity of the security issuer, (2) date of security issuance,<sup>59</sup> (3) maturity date, (4) redemption value, (5) securities price used in the calculations by the allocation or creditor approach (specify), (6) amount of accrued interest recorded by the allocation or creditor approach, and (7) call or conversion date, if applicable.

#### **Bearer-type securities other than shares, by economic sector**

**5.113** An FC is unlikely to be able to identify the current holders of liabilities in the form of bearer-type securities—that is, those that, when purchased in secondary markets, are not registered in the name of the new holder. In the absence of such information, FCs are unable to adhere to the *MFSM* methodology, in which the data for securities liabilities are disaggregated by economic sector.

**5.114** Securities that are issued, held, and traded exclusively within the FC sector do not create a sectorization problem for the monetary and financial statistics. Central banks sometimes issue bearer-type securities for which ODCs are the only eligible purchasers. FCs—the central bank, ODCs, or OFCs—may issue securities that can be held and traded exclusively among FCs. Suppose bearer-type securities issued by ODCs can be held only by FCs. Because of secondary market trading in the securities, the ODC does not have the information required for the disaggregation by holding sector—that is, into separate categories for central bank, ODCs, and OFCs. However, the compilers of the monetary and financial statistics receive data, by economic sector of holder, in the form of FCs' reporting on their *securities holdings*, which are disaggregated by economic sector of issuer (including separate categories for the central bank, ODCs, and OFCs). Using these

<sup>58</sup>Even for a zero-coupon bond of long maturity, the accrued interest adjustment would not be appreciable if the secondary market purchase occurred shortly after security issuance and if market interest rates (therefore, bond yields) had been relatively stable in the interim.

<sup>59</sup>The secondary-market purchaser knows the date of security issuance but is unlikely to know the selling price at inception. In the unlikely event that the original selling price (that is, cost at issuance) is known, this information should be included in the supplementary data for the security.



data provided to the compilers, the bearer-security liabilities of the ODC sector (but not those of an individual DC) can be disaggregated by FC subsector of holder.<sup>60</sup>

**5.115** For bearer-type securities issued and held exclusively within the FC sector, the recommendation is that FCs disaggregate their bearer-type securities liabilities on the basis of the economic sector of the original purchaser of the securities. The compilers can reapportion the securities liabilities among the relevant categories of FCs, using the asset data—that is, securities holdings disaggregated by sector—reported by the FCs.<sup>61</sup>

**5.116** Sectoral disaggregation is more complicated when the bearer-type securities issued by FCs are held by several domestic sectors and, in some cases, nonresidents. In some countries, security ownership surveys are conducted for use in disaggregating the securities data for the monetary and financial statistics. Surveys that focus on nonresident holdings of securities (that is, equity and debt instruments) are used to obtain data for the balance of payments statistics in many countries.<sup>62</sup>

**5.117** The broader recommendation in this *Guide* is that *all bearer-type securities issued by all economic sectors should be classified by economic sector of the original purchasers of the securities*. Provided with these data, compilers of the monetary and financial statistics need to adjust the data to take account of cross-sector trading in the secondary market during the period.

**5.118** The compilers will have access to the quarterly data on securities holdings of all FCs (assum-

ing that OFCs report quarterly), disaggregated by economic sector of issuer. However, the compilers will need to develop a securities ownership survey for obtaining data on the securities holdings of sectors other than the FC sector. For the monetary statistics, the survey would need to cover only other sectors' ownership of bearer-type securities issued by the central bank, ODCs, and OFCs, respectively. However, to provide data for the financial statistics, the ownership survey should cover bearer-type securities issued by all domestic sectors.<sup>63</sup> It is recommended that *the securities ownership survey should be conducted on a quarterly or at least annual basis (assuming that a monthly survey is not feasible)*. If the bearer-type securities are also held by nonresidents, portfolio investment surveys for the balance of payment statistics would provide additional input for the sectoral disaggregation in the monetary and financial statistics. In some countries, information on securities ownership, by economic sector, may be available from custodial repositories for securities.

## Loans

### General principles

**5.119** Stock data for national-currency-denominated loans (assets or liabilities) are recorded at book value—that is, the nominal amounts of outstanding loans inclusive of accrued interest.<sup>64</sup>

**5.120** Loan transactions normally comprise the nominal amount of new loans *plus* accrued interest on loans<sup>65</sup> *less* loan principal repayments. In normal circumstances, transactions in loans denominated in national currency are equal to the period-to-period change in loans outstanding (that is,  $CS - OS$ ) *less* *OCVA* (often arising from provisions for loan losses).

<sup>60</sup>Data reporting by OFCs may be on a quarterly or annual basis. If so, monthly data for their securities holdings would need to be estimated for use in compiling the data for DCs.

<sup>61</sup>The monthly monetary statistics can be adjusted, even if OFCs report only on a quarterly basis. The compilers receive monthly data on the total securities *issuance* by ODCs, as well as on central bank and ODC *holdings* of the securities, disaggregated by sector of issuer. From these data, the share of the securities issuance that is held by OFCs can be derived residually. However, the total amount of security issuance by OFCs would be available only on a quarterly basis.

<sup>62</sup>These surveys are used to obtain data on cross-country securities holdings disaggregated by the securities owner's country of residence. On security ownership surveys, see International Monetary Fund (2002), Chapter 2. For the monetary and financial statistics, the data on nonresident holdings is relevant, but the breakdown by country of residence is not needed.

<sup>63</sup>In particular, transactions data on bearer-type securities issued by central government, state and local government, public nonfinancial corporations, other nonfinancial corporations, and other resident sectors—disaggregated by economic sector of the securities purchaser/seller—are needed for the flow-of-funds statistics.

<sup>64</sup>This is consistent with IAS 39.AG68, which states: "Instruments that are classified as loans and receivables are measured at amortized cost without regard to the entity's intention to hold them to maturity."

<sup>65</sup>Transactions can arise from the indexation of loan principal. Amounts arising from indexation of the principal are treated as interest that is reinvested in the financial asset. In particular, the increase in principal arising from the indexation should be treated as a transaction rather than as a revaluation. (See *MFSM*, ¶216.)

**5.121** For national-currency-denominated loans, valuation changes arise in the exceptional cases of debt refinancing, debt assumptions, and debt-debt and debt-equity swaps (see *MFSM*, ¶210–212). In these cases, transactions in national-currency-denominated loans are given by  $T = CS - OS - OCVA - VC$ , where  $VC$  is the valuation change that is part of the loan refinancing, loan assumption, loan-debt swap, or loan-equity swap. A valuation change is recorded for the loan prior to the loan being replaced by (1) a new loan to the original debtor (loan refinancing), (2) a new loan to a new debtor (loan assumption), or (3) securities issued by the original debtor (loan swap for securities) or a new debtor (combination of a loan assumption and swap).<sup>66</sup> The same principles apply for valuation changes that are recorded for securities other than shares prior to securities refinancing, assumption, or swap.

**5.122** Loans denominated in foreign currency are recorded at book values when expressed in foreign currency and are converted to domestic currency units on the basis of the market exchange rates that prevailed at the end of the reporting period. Transactions in foreign-currency-denominated loans are converted into domestic currency units by using the market exchange rates that prevailed at the times of the transactions. Using the data for opening and closing stocks and OCVA, data for the sum of transactions and valuation changes (arising from exchange rate changes) can be derived residually. Separate data for loan transactions and for valuation changes can be obtained through collection of data for each flow, collection of data for one of the flows and residual deviation of the other flow, or through estimation of transactions and valuation changes, using the daily-average exchange rate for the period (see Annex 5.1).

### Commercial loans

**5.123** Commercial loans—that is, loans to business enterprises—are contracted on a fixed- or variable-rate basis and stipulate that all interest is to be paid at maturity, along with repayment of the loan principal (called a *fee simple basis*), or that interest is to be paid at monthly, quarterly, or annual intervals over the life of the loan. Payment of all interest at maturity

<sup>66</sup>The valuation change takes place before the swap and therefore is recorded for the loan rather than for the securities in the swap.

is standard for many short-term loans, whereas periodic interest payments are common for long-term loans. Regardless of the interest payment schedule, accrued interest is included within the transactions and closing stock for the loan. The amount of accrued interest can be calculated on a time proportion basis (that is, as the prorated daily interest charge *times* the number of days of accrual) or on a compounded basis, which entails computation of the amortized cost of the loan. The recommendation is *to calculate the accrued interest on a compound basis for long-term loans for which all interest is paid at maturity or at periodic intervals that exceed one year.*<sup>67</sup>

### Loan participations

**5.124** A loan participation<sup>68</sup> should be recorded as the book value of the FC's participation in the loan. The book value is equal to the acquisition cost for the loan participation (excluding fees or commissions) *plus* accrued interest and, if denominated in foreign currency, is converted into national currency units at the market exchange rate that prevailed at the end of the reporting period. Transactions comprise the principal amount of new participations *less* principal payments *plus* accrued interest.

### Mortgage and installment loans

**5.125** Mortgage loans (residential or commercial), home equity loans, and consumer installment loans for purchases of automobiles or other durable goods most commonly<sup>69</sup> call for interest and principal payments at regular intervals (usually monthly) over the life of the loan. The periodic payments for a fixed-rate loan usually are equal in amount (called a *fully amortized* loan), but the share of interest payment and principal repayment in each payment varies

<sup>67</sup>Explanation and examples can be found in the *External Debt Statistics Guide* (Bank for International Settlements and others, 2003), ¶2.56–2.69.

<sup>68</sup>Loan participations are described in Chapter 4.

<sup>69</sup>“Most commonly” is a qualifier to account for the trend, in at least one country, of extending “interest-only” mortgage loans, which require all principal to be paid at maturity or which delay the start of amortization of interest and principal payments for several years into the life of the loan. Though referred to as a recent innovation in mortgage lending, these loans are more aptly described as a repeat of history. Until the 1940s, most mortgage loans were of three- to five-year original maturity and were made on an unamortized or partly amortized basis. At maturity, the borrower was provided the opportunity to renew the loan at a new loan rate—an arrangement akin to the adjustable-rate mortgages that were considered an innovation in the 1970s.

over the life of the loan. As the loan matures, a progressively larger share of each payment is principal repayment, and a declining share represents interest payment. For adjustable-rate mortgage loans, the interest rate is adjusted up or down at specified intervals over the life of the loan, in response to upward or downward movements in a market interest rate to which the loan rate is indexed. When the loan rate is adjusted, the interest and principal repayment schedule is revised to account for the new loan rate and the remaining principal.

**5.126** Transactions are recorded in the amount of new loans *less* principal payments *plus* accrued interest. Principal payments for mortgage loans include the principal components of the periodic payments during the term of the loan, as well as prepayments—repayment of loans prior to maturity. Often, a residential mortgage is fully repaid several years before maturity, when the homeowner sells the mortgaged property to acquire a new home (and a new mortgage) or the homeowner engages in a mortgage refinancing—replacement of the existing mortgage loan to take advantage of the lower interest rate on a new mortgage loan from the same or a different lender.<sup>70</sup> Accrued interest can be calculated on a time proportion basis—that is, the total amount of the next interest payment *divided* by the number of days between payments *times* the number of days since the most recent payment. Installment loan transactions are recorded in the amount of the net lending—new loans *less* repayments—*plus* accrued interest calculated on a time proportion basis.

#### **OCVA—provisions for loan losses and other loan-related categories**

**5.127** OCVA entries arise from reclassification of loans, for example, (1) as securities other than shares, for loans that are traded in secondary markets; (2) as claims on or liabilities to an ODC, when an OFC has been reclassified as an ODC; and (3) as loans to a different economic sector—for example, when a *Public nonfinancial corporation* that is a borrower has been privatized and reclassified as an *Other nonfinancial corporation*.

<sup>70</sup>In many cases, homeowners are entitled to repay mortgage loans without incurring prepayment penalties. The propensity for early repayment of many commercial mortgage loans and some residential mortgage loans is lower, because prepayment penalties are attached.

**5.128** Major categories of loan-related OCVA arise from loan impairments or bad debt losses—that is, potential or actual losses arising from the inability of an FC to collect all amounts due (principal and interest) according to the contractual terms of the loans. OCVA entries and contra-entries for these categories are:

- *Provisions for loan losses.* An OCVA entry in the amount of the expected loss is posted to *provisions for loan losses* (a subcategory of *other accounts payable—other*). The OCVA contra-entry is a decrease in *retained earnings* within the liability account for *shares and other equity*. This OCVA contra-entry in retained earnings reflects that the provision had been recorded as an expense in the profit or loss accounts, prior to the profit or loss for the period having been transferred to retained earnings.<sup>71</sup>
- *Loan loss write-offs.* A loan write-off is shown as an OCVA reduction in the outstanding loans to the economic sector that includes the debtor in default. The OCVA contra-entry is a reduction in *provisions for loan losses* within *other accounts payable—other*.<sup>72</sup> No provision for loss may have been made for the loan, or the provision for loss may have been insufficient to cover the entire amount of the loan loss that is written off. In such instances, all or part of the OCVA contra-entry is posted as a reduction in *retained earnings* (reflecting the recording of an expense in the profit or loss accounts), or as a reduction in *general and special reserves* within the liability category of shares and other equity.<sup>73</sup> A combination of OCVA contra-entries may be required when a secured loan is written off, and the FC has taken possession of the assets pledged as collateral. In such instances, the OCVA contra-entries are (1) a negative entry for

<sup>71</sup>The positive entry in provisions for loan losses and negative entry in retained earnings preserve the adding-up requirement for the OCVA column (see the stock and flow illustration in Table 5.1).

<sup>72</sup>If the full amount of the loan write-off has been provisioned, the negative OCVA entry for the reduction in loans (an asset account) is matched with the OCVA entry for a reduction in provisions for loan losses (a liability account), and the adding-up condition is maintained for the OCVA column shown in Table 5.1.

<sup>73</sup>The permissibility of using special and general reserves to absorb all or part of the loan write-off would depend on the national accounting standards, the supervisory regulations for the maintenance and use of special and general reserves, and the financial circumstances of the FC. As part of a major clean-up of its loan portfolio, an FC may have loan write-offs that exceed its retained earnings. The corporation may be permitted to charge part of the loan write-offs against special and general reserves, in conjunction with a workout plan for rebuilding such reserves in the future.

the provision for loss, if any, that was made for the loan; (2) a positive entry in the relevant asset category for the acquired assets (valued at market or fair value); and (3) a negative entry in retained earnings (arising as an expense in the profit or loss accounts) to cover the share of the loan write-off that is not covered by the provision for loss and by the value of the assets realized through foreclosure or other legal means.

- *Reversal of provisions for loan losses.* Loan recoveries—that is, unexpected repayment of impaired loans—sometimes occur prior to loan write-off. An OCVA entry in the amount of the loan recovery is made to reverse the earlier provisioning for loan loss, and an OCVA contra-entry is posted as an increase in retained earnings (which is channeled through revenue in the profit or loss accounts to reverse the previous expense that was posted when the provision for loss was made). The recovery may be the full amount or only part of the principal and interest.<sup>74</sup>

An *interest arrear*—that is, interest that is overdue for payment—is already included in the relevant asset or liability category in the sectoral balance sheet described in Chapter 7, if the interest has already been recorded on an accrual basis. In other words, the interest shifts from being an accrual to an arrear at the time that it changes from an amount earned but not yet due (that is, accrued) to an amount overdue (that is, in arrears). (*MFSM*, ¶238)

Many countries mandate that scheduled interest payments that have been in arrears for a specified period—for example, 60 days or longer—must be excluded from the values of the loan portfolios of lending institutions. (*MFSM*, ¶239)

**5.129** Depending on the national financial reporting standards and supervisory regulations for FCs, interest arrears may be recorded by the creditor in either of two ways:

- *Balance-sheet approach.* The interest arrear created during a reporting period is included in the outstanding amount of the loan, and the interest—earned but unpaid—is included in income for the

period. In recognition that the interest is unlikely to be paid in the future, an additional provision for loan loss in the amount of the interest arrear is made. The income entry for unpaid interest is offset by the expense entry for the provision for loss, and profit for the period is not affected.

- *Off-balance-sheet approach.* When the loan is deemed to be impaired or uncollectible,<sup>75</sup> interest receivable is excluded from the outstanding amount of the loan and is no longer posted as income in the profit or loss accounts. Interest ceases to “accrue”—that is, all interest that is due or overdue for payment is recorded on an off-balance-sheet basis. A provision for loss of loan principal is made, but no provision is made for interest arrears, because the unpaid interest has not been included in the balance sheet and profit or loss accounts. Accrued interest and interest in arrears may have been included in the outstanding loan balance (recorded as a transaction in accrued interest) until such time when the loan was declared nonperforming. Removal of this interest accrual/arrearage from the balance sheet should be recorded as a reversing transaction in the loan balance and an expense in the profit or loss accounts.

**5.130** A rule is used to determine when a loan should be classified as an NPL (nonperforming loan)—that is, a loan that has been impaired by the borrower’s failure to meet the payment obligations under a loan contract. In many countries, NPLs are defined as those for which interest and/or principal payments are overdue by more than 90 days.<sup>76</sup> The rule is used to determine when to commence provisioning for loan losses including interest arrears (balance-sheet approach) or excluding overdue interest from revenue and the outstanding loan balance (off-balance-sheet approach).

**5.131** The general recommendation in the *MFSM* is that interest arrears be included in the outstanding loan balances, accompanied by interest arrears data in the memorandum items that accompany the sectoral balance sheets. However, an exception is made

<sup>74</sup>In exceptional cases, loan repayment may occur after the loan write-off. The amount of the loan recovery is posted to revenue, thereby reversing the earlier entry of an expense in the amount of the loan write-off, and a contra-entry is made for the cash or other form of payment from the defaulted borrower. Conceptually, the loan recovery is an OCVA but, in practice, may be treated as a transaction, since the recovery is for an asset that is no longer in the balance sheet.

<sup>75</sup>Determination that a loan is impaired or uncollectible can be based on various types of objective evidence that the borrower is unlikely to repay. Default or protracted delinquency of loan payments, constituting a breach of contract, provides strong evidence of impairment. Other evidence is described in IAS 39.59.

<sup>76</sup>Earlier classification as nonperforming could occur if the borrower defaulted or displayed a high probability of default within the 90-day period.

for countries in which the national financial reporting standards call for off-balance-sheet recording of interest arrears. The recommendation in this *Guide* is that *interest arrears be included or excluded from the outstanding amounts of loans, in accordance with the national standards.*<sup>77</sup> In this *Guide*, the *MFSM* recommendations for the memorandum items for loan payments (interest or principal) in arrears have been amended (see *Memorandum items for loans*, a later subsection of this chapter).

### Financial leases

**5.132** Financial lease payments, sometimes called *rental payments*, are treated as *interest payments and principal repayments* in the *1993 SNA* and the *MFSM* methodology, as well as in many national financial reporting standards. In the IAS, “The interest rate implicit in the lease is the discount rate that, at the inception of the lease, causes the aggregate present value of (a) the minimum lease payments and (b) the unguaranteed residual value to be equal to the sum of (i) the fair value of the leased asset and (ii) any initial direct costs of the lessor” (IAS 17.4).

**5.133** Financial leases are often structured similar to the interest and principal payment schedules for a mortgage loan that calls for periodic payments in equal amount over the term of the loan. However, unlike a mortgage or installment loan, a financial lease may stipulate that (1) the first lease payment is to be made at the inception of the lease, (2) the periodic payments are not all of equal amount, and/or (3) a lump sum payment is required at the termination of the lease, if the lessee is to acquire the asset. Most financial leases are *net leases* in which the lessee pays any operating expenses and property tax and agrees to maintain and insure the asset. Depending on the national tax code, the lessor (who is still the legal owner of the leased asset) may be entitled to take depreciation allowances for the asset.

**5.134** In this *Guide*, it is recommended that *the lessee and lessor’s records for the lease value at inception, as well as for all subsequent interest and*

<sup>77</sup>In principle, loan stocks could be adjusted to reintroduce interest arrears. However, such adjustment is complicated by the need for contra-entries to accompany the entries for posting the interest arrears to the loan balances. A comprehensive restatement of the loan stocks would require additional OCVA entries for provisions for loan losses, corresponding contra-entries in expenses, and restatement of retained earnings.

*principal flows, should agree.* At inception, the lessor and lessee should record a loan transaction in the amount of the lessor’s net investment in the lease, which should equal the market or fair value of the leased property. For the lessee’s accounts, the contra-entry is a nonfinancial asset, recorded *as if* title to the leased property had been conveyed to the lessee. For the lessor’s account, the contra-entry depends on the way in which the leased asset has been acquired:

- *Asset previously recorded in lessor’s accounts.* A decrease in nonfinancial assets is recorded, taking into account the residual value of the leased property.
- *Asset acquired expressly for the lease.* The lease asset is acquired directly from the manufacturer or some other seller and is conveyed to the lessee, without having been recorded as a nonfinancial asset in the lessor’s accounts. The lessor shows a reduction in cash or deposits (or an increase in other accounts payable), arising from the purchase of the asset at the time of the lease.
- *Sale and lease back.* The lessee sells the asset to the lessor and then leases the asset from its new owner. The lessor records a cash outflow in the amount of the asset purchase. The lessee records a corresponding increase in cash from the asset sale.<sup>78</sup>

**5.135** The residual value of the leased property must be taken into account in calculating the cash flows and recording the lease. Financial leases often stipulate that, at the end of the lease term, the lessee has the right to acquire title to the leased property upon the fulfillment of agreed conditions (sometimes called hire purchase contracts). It is recommended that *the present value of the lessee payment for the residual value of the asset should be included in the valuation of the lease, whether or not the lessee is expected to acquire the asset at the termination of the lease.*<sup>79</sup>

<sup>78</sup>Sale and lease-back is motivated by a lessee’s desire to obtain funds at a lower borrowing rate than would be obtainable in the loan or securities markets. IAS 17.58–60 states: “The lease payment and the sale price are usually interdependent because they are negotiated as a package. . . . any excess of sales proceeds over the carrying amount shall not be immediately recognized as income by a seller-lessee. Instead it should be deferred and amortized over the lease term. . . . the transaction is a means whereby the lessor provides finance to the lessee, with the asset as security.”

<sup>79</sup>If the lessee acquires the leased asset, the payment for the residual value is included in the last lease payment. If the lessee does not acquire the asset, the final payment includes, in effect, a payment in kind in the form of return of the asset to the lessor, who records the transaction as an acquisition of a nonfinancial asset in the amount of the residual value of the asset.

**5.136** Financial leases that become impaired or uncollectible are treated in the same way as impaired loans. In particular, provisions for loss and write-offs for financial leases are subsumed within provisions for loan losses and loan write-offs. As with foreclosure for a secured loan, the lessor can repossess the asset if the lessee fails to make the lease payments. The present value of the proceeds expected from the repossession of the asset should be deducted in calculating the expected loss on an uncollectible lease.

### **Repurchase agreements, securities lending, and gold swaps**

Repurchase agreements that are included in the national definition of broad money should be classified as non-transferable deposits. All other securities repurchase agreements should be classified under loans. (*MFSM*, footnote 11, p. 30)

Securities lending that is backed by cash collateral is very similar to a repo, and so, is treated statistically in the same way [that is, as loans]. (*MFSM*, ¶151)

*Gold swaps* are forms of repurchase agreements commonly undertaken between central banks or between a central bank and other types of financial institutions. . . . Consequently, they should be treated in like manner [that is, as loans]. (*MFSM*, ¶154)

**5.137** A securities repurchase agreement (or a securities lending or gold swap arrangement that has cash collateral) should be recorded as a loan in the nominal amount of the cash that the cash provider conveys to the cash taker (that is, securities or gold provider). The amount of the “loan” (that is, cash provided) is generally less than the market value, at inception, of the securities (or gold) that are to be sold and repurchased, because the cash provider requires a *margin*—securities that are valued in excess of 100 percent of the amount of cash provided.

**5.138** The market quotation for a repurchase agreement is an interest rate rather than a purchase and repurchase price. The interest rate represents the annualized yield that the cash provider earns from the agreement. Accrued interest, which should be included in the stock and transactions data for the securities repurchase agreements, will be relevant for only a subset of the agreements. Most overnight repurchase agreements will mature before the end of the reporting period. However, securities repurchase agreements

that have maturities of several days or, in some cases, several weeks or months have become more prevalent in recent years. Similarly, securities lending and gold swaps agreements often have somewhat longer maturities. The accrued interest on all securities repurchase and lending agreements (and gold swaps) that are outstanding at the end of the reporting period should be included in the closing stock and transactions data for the repurchase agreement.

**5.139** The securities repurchase (or a securities lending) agreement may stipulate that, if the market value of the securities falls by a specified amount, the securities provider (that is, cash taker) is required to provide additional margin by supplying more securities as collateral. The provision of additional margin in the form of securities (as in the case of the original margin in the form of securities) is not reflected in the stock and flow data recorded by either the cash provider or cash taker, but rather is recorded off balance sheet by both parties to the agreement.<sup>80</sup>

**5.140** In some atypical securities repurchase (or securities lending) agreements, the cash provider may be required to provide additional cash during the term of the agreement, particularly if the market price of the contracted securities has increased appreciably.<sup>81</sup> The additional cash is provided in the form of a repayable margin deposit,<sup>82</sup> rather than as an augmentation to the cash collateral that was conveyed at the inception of the agreement. Therefore, the stock and flows for the repurchase agreement (within loans) are unaffected by the depositing of repayable margin. In particular, the yield from the repurchase agreement is not recalculated when additional cash is provided as repayable margin. Posting of repayable margin is a separate deposit transaction.

<sup>80</sup>The securities provided as additional margin may be of the same type or may differ from the securities purchased at the inception of the agreement.

<sup>81</sup>Additional cash margin, to the limited extent employed, usually arises for securities-driven agreements. *Securities-driven repurchase (or securities lending) agreements* are those that are initiated by the securities taker (that is, the cash provider), often prompted by the securities takers’ need to obtain specific securities to satisfy a securities customer’s immediate demand. *Cash-driven securities repurchase agreements* are those initiated by the cash taker (that is, securities provider). For a securities-driven agreement, the cash taker (that is, securities provider) may have enough bargaining strength to include a repayable margin provision in the agreement.

<sup>82</sup>This mechanism is the same as the provision of repayable margin for financial derivative contracts, described in the *MFSM*, ¶270–271.

If the margin deposit is interest-bearing, any accrued interest is reflected in the deposit account, rather than in the loan account for the securities repurchase (or securities lending) agreement.

**5.141** During the term of the agreement, the purchased (or lent) securities may be on-sold to a third party. The on-selling of the securities does not affect the stock or flows for the agreement (recorded within loans). However, the on-seller should record a short-sale<sup>83</sup> in the securities.

**5.142** This *Guide* recommends calculation in foreign currency units for the stock and flow data for securities repurchase (or securities lending) agreements that are denominated in foreign currency, followed by conversion into national currency units using the market exchange rate. Transactions flows should be compiled on an agreement-by-agreement basis—that is, from the transactions records for each securities repurchase/lending agreement. The flow data for valuation changes for foreign-currency-denominated agreements can be derived by using the data for opening and closing stocks, transactions, and OCVA (if applicable).

### Memorandum items for loans

**5.143** The memorandum items for accrued interest, as recommended in this *Guide*, are shown along with the sectoral balance sheet in Table 7.1 of the *MFSM* (page 86). These items are stock and flow data for the total amounts of accrued interest on loan claims and loan obligations.

**5.144** In Table 7.1 of the *MFSM*, the memorandum items include stock and flow data for interest arrears on loan claims, disaggregated by economic sector of borrower, and the total amount of interest arrears on loan obligations. In the *MFSM*, no memorandum item for loan principal arrears is specified. In this *Guide*, the recommendations for the memorandum items are revised in recognition that less disaggregated data on interest arrears, combined with data on principal arrears, are more appropriate in many national contexts. The revised recommendations are:

- *At a minimum, data should be provided for the total amount of interest and principal arrears on loan assets.* For some lending institutions, inter-

est and principal arrears are likely to arise mainly from their loans to nonfinancial corporations and/or to households (within “other resident sectors”). It is sufficient for FCs to report a single item—total interest and principal arrears on loan assets—rather than separate data for interest arrears, disaggregated by borrowing sector, and total principal arrears. Inclusion of principal arrears is important, in particular, so that the data reflect the total overdue payments for mortgage loans and other loans that call for periodic (usually, monthly) installment payments of interest and principal.

- *At a minimum, data should be provided for total interest and principal arrears on loan liabilities.* Arrears in interest and principal payments on loan liabilities arise mainly for FCs that are experiencing financial difficulties that are likely to lead to their liquidation or reorganization. For a central bank, interest and principal arrears on loan liabilities may arise from its inability to make payments for loans that require payment in foreign exchange that is not readily available.<sup>84</sup>

**5.145** The data on interest and principal arrears can include all overdue loan payments or only payments that have been overdue for a specified period. Technically, arrears comprise all payments that are overdue. However, delinquent payments are not necessarily indicative of nonperforming loans. Loan payments—particularly, for mortgage loans and other types of consumer loans—sometimes are received after the payment due date, for example, because of borrowers’ tardiness in making payment or postal service loss or delivery delay of payments sent by mail. Loan payments that are overdue (for example, by 30 days or less) but are expected to be made on a delinquent basis, can be excluded from the data for interest and principals arrears.

Therefore, this manual recommends that data on expected loan losses (disaggregated by debtor sector) be shown as memorandum items accompanying the sectoral balances sheets described in Chapter 7. These data can be used to obtain the expected realizable value of loans, by deducting the expected loan losses (whether or not covered by loan loss provisions) from the book values of the loans. (*MFSM*, ¶207)

<sup>83</sup>Short-selling—the sale of a financial asset that is not currently held on-balance-sheet—is described in the *MFSM*, ¶147.

<sup>84</sup>For example, a country may have interest and principal arrears on IMF loans that are recorded as liabilities of the central bank, which may be designated as the fiscal agent in a member country’s relationship with the IMF.

**5.146** This *Guide* recommends that *a reasonable effort be made to estimate the expected losses from bad or impaired loans*, while recognizing that the precision of the estimation is compromised by uncertainty about the timing and amount of future cash flows, particularly from collateralized loans that are in default. Valuation is relatively straightforward for some types of financial assets used as loan collateral—in particular, deposits or securities that are acquired through loan foreclosure or other legal means. Less precise estimates usually can be made for the market or fair value of nonfinancial assets such as commercial or residential real estate, automobiles, specialized machinery or other equipment, or inventory that has been acquired as a result of default on secured loans.

**5.147** *Expected loan losses should be disaggregated by economic sector of debtor.* The accounting data on provisions for loan losses can be directly used in estimating the expected loan losses, if these data reflect, to a reasonable degree, the total expected losses on bad or impaired loans. *Specific provisions* are provisions for expected losses on loans that are identifiable as bad or impaired. *General provisions* are provisions for losses that are expected to arise within a portfolio of loans, even though the individual loans that will become uncollectible cannot be identified and covered by specific provisions.<sup>85</sup> *To be directly useful in estimating expected loan losses, the data for general provisions, as well as for specific provisions, for loan losses must be disaggregated by economic sector of the debtor.*

**5.148** Expected loan losses are divided into three categories that are based on the secured or unsecured nature of the loan and the prospects for full or only partial loss of the book value of the loan:

- *Full loss on unsecured (that is, uncollateralized) loans.* The expected loss on an unsecured loan is the entire book value of the loan, if the creditor expects no future cash flows from the loan.
- *Partial loss on unsecured loans.* The expected loss on an unsecured loan is less than the book value of the loan, because the lending institution expects

some future cash flow through recourse to its creditor claim on the assets of an enterprise that will be liquidated.

- *Partial loss on secured (that is, collateralized) loans.* The expected loss on a secured loan is the book value of the loan *less* any recovery that results from possession and subsequent sale of the assets that were collateral for the loan.

**5.149** The expected loan loss is the difference between the carrying amount (that is, the current book value of the loan) and the recoverable amount—that is, the present value of the expected cash flows to be obtained from the borrower or through liquidation of collateral. The discount rate to be used in calculating the present value of expected cash flow is the *original effective interest rate* on the loan.<sup>86</sup> If that loan has a variable interest rate, the discount rate for measuring the recoverable amount should be the *current effective interest rate*.<sup>87</sup> The expected cash flows from secured loans should be based on the expected net proceeds from the sale of the assets used as collateral; costs incurred in acquiring, storing, or maintaining the collateral should be netted from the proceeds of the asset liquidation, or should be treated as negative cash flows, in calculating the present value of the expected cash flows. These principles for the measurement of the recoverable amount for impaired assets are consistent with IAS 39.63–65.

**5.150** For the balance-sheet valuation of impaired loans, IAS 39.63 states that “The carrying amount of the asset shall be reduced either directly or through the use of an allowance account. The amount of the loss shall be recognised in profit or loss.” Direct reduction in the carrying amount of an impaired loan is inconsistent with the *MFSSM* methodology in which all loans, impaired or otherwise, are recorded at book value with no deduction for expected loan losses. Use of an allowance (provision for loan loss) account is consistent with the methodology of the *MFSSM* and this *Guide*, but deduction of the allow-

<sup>85</sup>The calculation of general provisions is based on national practice, as established by the lenders or as imposed within the national accounting or supervisory standards. General provisions can be calculated in various ways—for example, as a percentage of (1) total assets (to provision both loan and non-loan assets), (2) total loans, or (3) loans other than those covered by specific provisions.

<sup>86</sup>*Original effective interest rate* is IAS terminology for the original yield to maturity—that is, the discount rate that, at the time of loan origination, equated the origination value to the present value of the future cash flows (interest and principal payments)—as contracted.

<sup>87</sup>*Current effective interest rate* (current yield to maturity) is the discount rate that equates the current book value of the loan to the present value of the future principal and interest payments that would be received if the loan were not impaired. The interest payments in the present-value calculations are based on the current level of the variable interest rate.



ance from the carrying amount (that is, outstanding loan balance) is inconsistent.

**5.151** In the *MFSM* and this *Guide*, the realizable values (analogous to fair values) of loans are compiled as supplementary data obtained by deducting expected loans losses from the book values of the outstanding loans, as recorded on the balance sheet. *The data for both outstanding loans and expected loan losses need to be disaggregated by economic sector so that the realizable value of loans to each sector can be derived as supplementary data.*

### Shares and Other Equity

*Shares and other equity comprise all instruments and records acknowledging, after the claims of all creditors have been met, claims on the residual value of a corporation. Ownership of equity is usually evidenced by shares, stocks, participations, or similar documents. This category includes proprietors' net equity in quasi-corporations, as well as shares and equity in corporations. It also includes preferred stocks or shares that provide for participation in the residual value on dissolution of an incorporated enterprise. (MFSM, ¶165)*

#### General principles

**5.152** In the financial statistics, shares and other equity—whether held as assets or issued as liabilities<sup>88</sup>—are recorded at market or fair values. The total value of the shares of a corporation is equal to the market price (or fair value) per share *times* the number of shares issued and currently outstanding. Shares and other equity denominated in foreign currency are recorded at the market or fair value expressed in foreign currency and are converted to domestic currency units on the basis of the market exchange rates that prevailed at the end of the reporting period.<sup>89</sup>

**5.153** In the monetary statistics, shares and other equity held as assets are recorded in the same manner as in the financial statistics—that is, at market or fair values. However, in the monetary statistics, shares and other equity issued as liabilities are recorded at

the nominal value of the components of the shares and other equity account—funds contributed by owners, retained earnings, general and special reserves, SDR allocations (central bank only), and valuation adjustment.

**5.154** Corporations sometimes purchase their own shares in the market. In the financial statistics, the total value of an FC's shares is equal to the market price per share *times* the number of outstanding shares other than those reacquired and held by the FC. In the monetary statistics, the reacquired shares (called *treasury shares*) should be presented as a deduction from *funds contributed by owners* within the liability account for shares and other equity. No gain or loss should be recognized on the sale, issuance, or cancellation of treasury shares.<sup>90</sup>

**5.155** In the financial and monetary statistics, transactions in equity shares in the asset accounts of an FC are reported on a purchases-less-sales basis. Transactions in shares on the liability side of an FC's balance sheet consist of the proceeds from an FC's issuance of new shares, including shares from the exercise of stock options or bond conversions into shares, but excluding shares arising from stock splits or stock dividends.<sup>91</sup> Transactions in foreign-currency-denominated shares<sup>92</sup> and other equity are converted to domestic currency units at the market exchange rates that prevailed at the time of the transactions.

**5.156** In the 1993 *SNA* and *MFSM* terminology, transactions in other equity are principally in the form of *proprietor's net additions to the equity of quasi-corporate enterprises*—that is, funds or other resources (including fixed or other assets) that the owners provide for capital investment by quasi-corporate enterprises *less* withdrawals from quasi-corporate enterprises, where the withdrawals are proceeds from the sale of fixed or other assets, transfers of fixed or other assets, and funds taken from accumulated savings and reserves for the consumption of fixed capital. For quasi-corporations, all equity (including retained earnings and reserves)

<sup>88</sup>*Shares and other equity* is designated as a liability in the 1993 *SNA* and *MFSM* methodology. In accounting and finance literature (including the IAS), *shares and other equity* is designated as *equity* and is treated as separate from liabilities.

<sup>89</sup>With few exceptions, shares are denominated in the national currency of the share issuer.

<sup>90</sup>This treatment is consistent with IAS 32.33 and IAS 32.AG36 and national financial reporting standards in many countries.

<sup>91</sup>A stock split or a stock dividend does not affect the corporation's cash flow or the proportion of these cash flows attributed to each shareholder.

<sup>92</sup>Equity shares include depository receipts, which are evidence of ownership of shares in foreign corporations, as well as directly owned shares of domestic and nonresident corporations.

is assumed to be held by the owners.<sup>93</sup> Equity withdrawals exclude current withdrawals from and contributions to the income of quasi-corporations.

**5.157** In the 1993 SNA and the MFSM, financial transactions related to immovable assets and unincorporated enterprises owned by nonresidents are classified as shares and other equity. For a quasi-corporation that is a direct investment enterprise wholly owned by nonresidents (for example, a foreign branch of a domestic FC), it is assumed that all retained earnings of the quasi-corporation (for example, foreign branch) are remitted to the parent enterprise (for example, domestic FC) and then reinvested as a net addition to the quasi-corporation's net equity. If the direct investment quasi-corporation is partly owned by nonresidents, only that portion of retained earnings proportional to the degree of ownership is imputed to be paid and reinvested. The same assumptions are made for incorporated enterprises; retained earnings are assumed to be remitted in proportion to the percentage of the equity owned by foreigners, and the reinvestment is recorded in shares and other equity.

#### Depository receipts

**5.158** The basic tenets of accounting for depository receipts (DRs) are (1) avoidance of double counting of ownership of the equity shares and (2) revaluation that reflects the market price or fair value of the DRs which, in turn, reflects the market value of the underlying shares. The owner of DRs in Country B records the DRs *as if* (except for the valuation) these were the underlying equity shares of the corporate issuer in Country A. The DRs are included in the *nonresident* subcategory within the asset category of *shares and other equity* in the accounts of the DR holder (ultimate investor or dealer). The underlying equity shares *do not* appear in the balance-sheet accounts of the FCs involved in the creation of the DRs. An exceptional balance-sheet entry arises if DRs are issued before the DC arranging the issue has acquired the underlying equity shares in the custodial account. To avoid double counting, the DC would record a negative holding of the underlying shares, given that

<sup>93</sup>Owners sometimes may provide quasi-corporation financing through the extension of loans, placement of deposits, or purchase of debt securities issued by the quasi-corporation, or other accounts payable. The owners and the quasi-corporations should record such transactions as loans, deposits, etc., rather than as equity.

the purchaser of the DRs would have reflected the equity ownership through the DR recording in the purchaser's account.

**5.159** *The DRs traded in active markets should be revalued on the basis of the market price quotations for the DRs. Those for which market price quotes are unavailable can be revalued on the basis of the market price at which the underlying shares are traded in the country of issuance, converted into national currency units at the market exchange rate.* Differences between the selling prices of DRs and the underlying shares can induce a brokerage house to buy more shares in the domestic market (Country A) for use as shares to back the issuance of additional DRs in the foreign market (Country B), thereby causing the market prices of the DRs and the shares to move toward parity. The process can also work in reverse through "cross-border trading" of the DRs in the country of origin of the shares. DRs are canceled by the DC in Country B, and the shares are released from the custodian bank and delivered back to the brokerage house in Country A.

#### Shares in investment pools

**5.160** Shares in a closed-end investment pool are valued at market prices that are established through trading of the fixed number of shares that constitute the total equity of the pool. Even though traded in over-the-counter markets, closed-end investment pools usually are actively traded, and market price quotations are obtainable from current sources.<sup>94</sup> If so, the current value of an investor's holding in a closed-end pool is equal to the market price per share (as of the reference date) *times* the number of shares held, and the value of the total equity of the investment pool is equal to the market price per share *times* the fixed number of shares outstanding. In circumstances in which market price quotations are unavailable, it is recommended that the fair value of the shares be determined on the basis of the *net asset value* (NAV) of the shares, the valuation method used for open-end investment pools. The NAV-based valuation should be adjusted upward or downward if it is known that, if available, market price quotations would indicate that value of the shares would reflect a substantial premium above, or discount below, the NAV.

<sup>94</sup>For example, Morningstar, Inc. offers comprehensive analysis and pricing information for more than 10,000 open-end and closed-end funds.

**5.161** Shares in an open-end mutual fund (or other open-market investment pools) are purchased directly from, or sold directly back to, the mutual fund, which stands ready to redeem outstanding shares or sell additional shares at the current value of shares. Through issuance and redemption of shares, the total number of shares in the mutual fund is open-ended. Given the absence of exchange or over-the-counter trading outside the mutual fund, the share price quotation of the mutual fund is based on the NAV of a share. For a mutual fund that has no liabilities (other than its equity), the NAV of each share is equal to the market value of the mutual fund's asset portfolio divided by the number of shares outstanding. The market value of the mutual fund's asset portfolio is determined by the market value (or fair value) of the bonds, equity shares, and other assets in the portfolio. Mutual funds' asset portfolios normally are revalued to the current market value on a daily basis. To obtain the NAV per share of a mutual fund that has liabilities in the form of securities or other debt instruments, the value of its liabilities is deducted from the market value of its asset portfolio before dividing by the number of shares outstanding. The mutual fund (or its agent that manages the fund) is responsible for the calculation of the NAV on a daily basis. For valuing their shares, investors (often including pension funds, insurance corporations, and other types of FCs) can obtain the NAV quotations from the account statements provided by the mutual fund and, for many mutual funds, from price quotations in the financial press.

**5.162** Mutual funds are designated as *load funds* and *no-load funds*, where a *load* refers to an up-front commission or other sales charge attached to the purchase of fund shares. The load should be recorded separately as an expense, rather than included in the shareholding—in accordance with the general principle that transaction costs are to be excluded from the outstanding amount of the financial asset.

**5.163** Change in value of an investor's equity holding in a money market mutual fund is reflected by variation in the number of shares held, rather than through changes in the price per share. Most money market funds have their share values fixed at US\$1 (or one unit of some other currency). Capital gains or losses and changes in the interest returns on the asset portfolio of the money market fund are taken into account by increasing or decreasing the number of fixed-value (one currency unit) shares owned by the investor. The manager of the money market fund

is responsible for monthly statements that show the investor's current share holdings.

#### **Fair values of infrequently traded or nontraded shares**

Two general methods for establishing fair values involve use of either:

- Market prices of financial assets and liabilities that are market traded but otherwise similar to the nontraded **or infrequently traded** financial assets that are being valued; or
- Discounted present values of future cash flows from nontraded **or infrequently traded** financial assets and liabilities. (*MFSM*, ¶220)

[Note: The boldface text does not appear in the *MFSM* and has been added for clarification.]

**5.164** Market price quotations are available on a daily basis for exchange-traded shares and, in some cases, on a daily or less frequent basis for over-the-counter shares.<sup>95</sup> Fair values need to be estimated for nontraded and infrequently traded shares, which collectively are referred to as *unquoted shares*. Nontraded and infrequently traded shares include those of viable corporations that are closely held—for example, when all shares of a corporation are held by members of one family or when all shares of a subsidiary are held by the parent corporation—and those of financially distressed corporations for which share trading has ceased. Nontraded *securities other than shares* are classified as loans, whereas *equity shares* that are tradable, but are not traded in active markets, still are included in the category of shares and other equity, along with equity shares for which market price quotations are available.

**5.165** This *Guide* recommends that, *if the equity holder has recently acquired the equity through an over-the-counter transaction, revaluation of the shares on the balance sheet of the new owner should be based on the transaction price (that is, recent purchase price) for the unquoted shares*.<sup>96</sup> Information on that transaction price is unlikely to be available

<sup>95</sup>For example, daily price quotations are available for shares sold on the New York Stock Exchange, as well as for those sold in over-the-counter markets such as the Nasdaq.

<sup>96</sup>All transactions in financial assets are valued at the sale price in the accounts (flow data) of the buyer and seller. The recommendation concerns the subsequent revaluation of unquoted equity in the new owner's balance sheet (stock data), which can be based on the sale price in a transaction that is considered "recent."

to unquoted shareholders other than the acquirer who engaged in the recent transaction. This *Guide* recommends a *flexible approach to unquoted-share valuation in the absence of a quotation of a recent transaction price*, extending the alternative valuation methods beyond those offered in the *MFSM*, ¶220. In particular, this *Guide* recommends the use of the *market capitalization method* (MCM) or revaluation based on (1) net asset value, (2) present value, or (3) own funds at book value.

### Market capitalization method

**5.166** Using the MCM, unquoted shares are valued as own funds at book value *times* a capitalization ratio that is calculated as the market value of quoted shares of a “similar corporation” *divided by* the amount of the latter corporation’s own funds at book value. The capitalization ratio can be adjusted to account for the greater liquidity of the quoted shares, given that the ability to trade these shares in an active market is likely to have a positive impact on sales price. An equivalent statement of the market capitalization formula (unadjusted for relative liquidity of the shares) is:

$$\text{Fair value of Corporation V} = \frac{(\text{MV of Corporation S})(\text{BV of Corporation V})}{(\text{BV of Corporation S})},$$

where *MV of Corporation S* is the market value of Corporation S, calculated as the quoted price per share of Corporation S *times* the total number of Corporation S shares outstanding, and *BV of Corporation V* and *BV of Corporation S* denote the total book values of the funds contributed by the owners of Corporation V and Corporation S, respectively.<sup>97</sup>

**5.167** A strength of the MCM is the ease of application, if a “similar” corporation can be identified. However, difficulty may arise in attempting to identify a Corporation S that is appropriate, given the corporate diversity with respect to:

- Product or service lines;
- Business risk;
- Institutional structure (parent or subsidiary corporation; number and type of subsidiaries, affiliates, and branches; etc.);

- Location (economic territory in which operations and product markets are situated);
- Financial leverage (debt/equity structure);
- Corporate scale (measured by annual revenue, annual profits, total assets, etc.);
- Number of outstanding shares of common stock;
- Liquidity of share trading;
- Management personnel and management policies; and
- Other characteristics.

**5.168** For most applications of the approach, it is likely that the comparator, or similar, corporation will be headquartered in the same country as the corporation having unquoted shares. However, use of market price data for a foreign corporation is not precluded, if the corporations are of comparable size, after conversion of the foreign corporation’s shares into national currency units, and otherwise similar.

**5.169** This *Guide* does not attempt to define *similar corporations*, but examples of relatively *dissimilar corporations* can be provided. Given some similarities, the corporations might still be viewed as dissimilar, if one or more of the following differences applied:

- *Financial leverage*. One corporation is 90 percent debt-financed, and the other corporation is 95 percent equity-financed.
- *Product line*. One corporation is mainly a manufacturer, and the other corporation is mainly a service provider.
- *Bond ratings* (or other available ratings). One corporation issues AAA-rated bonds, whereas the other corporation issues B-rated bonds (assuming both corporations have bond ratings).
- *Institutional structure and other factors*. One corporation is a subsidiary corporation whose debt is guaranteed by its parent corporation, whereas the other corporation is a stand-alone corporation that issues unguaranteed debt.

### Net asset value

**5.170** *Net asset value for unquoted shares* is defined as total assets at market value *less* total liabilities (excluding shares and other equity) at market value.<sup>98</sup> In some cases, an alternative method of valuing unquoted shares may be advisable, particularly for valuation of shares of corporations that have

<sup>97</sup>Alternatively, the formula can be stated on a per-share basis. *MV of Corporation S* is replaced by the per-share market price of Corporation S, and the *BVs* are on a per-share basis (that is, the book value of total funds contributed by owners divided by number of shares outstanding).

<sup>98</sup>Use of NAV for the valuation of the shares of open-end investment pools is covered in this chapter.

relatively large amounts of book-valued assets and/or intangible assets that are not fully reflected in the market value of total assets.

### Present-value approach

**5.171** Application of the present-value approach requires two types of data that are based on judgments that, though subjective, are reasonable and defensible:

- Estimates for uncertain cash flows over a time horizon that stretches into the distant future (assuming that the corporation is a going concern that is expected to operate indefinitely); and
- A discount rate (or rates) used to discount the expected cash flows in the present value formulation.

**5.172** This *Guide* focuses on the *dividend discount model* (DDM)—a well-established approach to estimation of the fair value of a corporation’s shares through discounting of the stream of future dividend payments by the corporation. Algebraic formulas for the DDM are presented in this *Guide*; derivation of the formulas can be found in many corporate finance and investments textbooks.<sup>99</sup> The share value determined by the DDM, which represents the fair value of the share, is called the *intrinsic value* in the finance literature. The market value (which is unobserved in the present context) can be above or below the intrinsic value, depending on investors’ demand for the shares. Despite its name, the DDM takes into account the value that investors attach to future capital gains, as well as to expected future dividends, from ownership of a corporation’s shares.

**5.173** The DDM is specified in terms of the amount of dividend that the corporation is expected to pay in the next period, denoted by  $D_1$ , and the dividend growth rate that is expected over an infinite time horizon. The DDM is easiest to apply when the dividend amount is assumed to remain constant over time. The fair value ( $V$ ) is:

$$V = D/r,$$

where  $D = D_1 = D_2 = D_3 \dots$ ;  $r$  is the discount rate (described later in this section);  $V$  can be viewed as the value of all shares outstanding (sometime called the *value of the firm*), if  $D$  is defined as the total divi-

dends paid to all shareholders, or can be viewed as the value of an individual share, if  $D$  represented the dividend per share; and  $D$  is defined as the before-tax dividend—that is, before deduction of income tax that shareholders are required to pay on dividends.

**5.174** The *constant-dividend version* of the DDM has limited applicability, possibly useful in exceptional circumstances for valuing a public utility or other corporation that has paid a constant dividend for many years and is expected to continue that dividend policy for many years into the future. It is usually more reasonable to assume that a corporation will increase its earnings over time and that the higher earnings will be accompanied by larger dividends. In the absence of additional information, a constant rate of dividend growth is assumed.

**5.175** Using the *constant-growth* DDM, the fair value of the share (where  $D_1$  is defined on a per-share basis) is:

$$V = D_1/(r - g),$$

which can be used to obtain a positive value for the share, if estimates are available for  $D_1$ ,  $r$ , and  $g$ , and under the reasonable assumption that the discount rate exceeds the dividend growth rate ( $g$ ).

**5.176** Use of the DDM requires estimates of the discount rate ( $r$ ) and dividend growth rate ( $g$ ). In this *Guide*, it is suggested that the discount rate can be specified as the rate of return on a portfolio of shares of several corporations in the same risk class (and possibly of the same industrial classification) as the corporation for which the fair value of shares is being determined. The returns on other corporations’ shares include both dividends and capital gains. In principle,  $r$  could be defined as the rate of return on the shares of an individual corporation in the same risk class, but the fair value estimation is highly susceptible to the choice of equivalent risk-class shares for which the rate of return is not representative of the average rate of return for corporations in that risk class.

**5.177** An alternative specification of the discount rate is the weighted-average cost of capital, based on the capital asset pricing model (CAPM) and specific to the corporation that is being valued. The CAPM formulation for the cost of capital includes the corporation’s beta, which is determined by relating the market rate of return on the corporation’s

<sup>99</sup>For example, see Bodie, Kane, and Marcus (2002), pp. 565–76.

shares to the rate of return on *the market*, where *the market* is defined as a well-diversified portfolio of corporate shares and other investments. However, the market rate of return of the corporation's shares depends on the market or fair value of the corporation's shares—precisely what is to be estimated from the present-value formulation and therefore is unavailable. This approach could be applicable if an historical, but still applicable, beta value could be identified.<sup>100</sup>

**5.178** Estimation of the dividend growth rate ( $g$ ) requires consideration of the corporation's dividend policy, as well as of the profitability of the corporation's investment projects that are financed from retained earnings as well as other sources of financing. The corporation's after-tax earnings ( $E$ ), or profit, are apportioned into the fraction paid as dividends ( $d = D/E$ ), called the *dividend payout ratio*, and the fraction retained by the corporation ( $b = 1 - d$ ), which is the *earnings retention ratio* (also called the *plowback ratio*). The formula for calculating the dividend growth rate is:

$$g = (ROE)(b),$$

where  $ROE$  is the rate of return on the corporation's equity—the measure of the future profitability of the corporation's retention and investment of earnings—measured on an after-corporate-tax basis and referring to the annual return on investment (rather than a monthly or quarterly return on investment).

**5.179** It is recommended that  $ROE$  be defined as:

$$ROE = E/BVE,$$

where  $BVE$  denotes the *book value* of equity (that is, *shares and other equity* in this *Guide's* terminology). In the formula,  $E$  and  $BVE$  are measured either as earnings and book value per share or as total earnings and total book value of the equity of the corporation.

**5.180** Alternative present-value models are needed for situations in which the DDM cannot be applied because the corporation currently does not pay dividends. No-dividend policies arise for corporations that are operating with a high degree of success or,

<sup>100</sup>This situation might arise for shares for which the market price, though currently unavailable (and needing to be estimated), was quoted in past periods. The beta coefficient estimated using the historical data for the market prices of the shares can be used to obtain the discount rate for the present-value calculations, if current applicability of the historical beta can be justified.

at the other extreme, for corporations that are experiencing financial difficulties that preclude the payment of dividends. *Growth stocks* are those of successful corporations for which the investment potential from plowing back (that is, retaining) all earnings is viewed as providing more shareholder value than paying out a fraction of the retained earnings as dividends.<sup>101</sup> For the valuation of growth stocks, the present-value method must be cast in terms of the discounted value of future earnings rather than future dividends.

**5.181** The fair value of a share of a corporation that does not pay dividends may be estimated as the *no-growth value* (NGV) of the share *plus* the *present value of growth opportunities* (PVGO):

$$V = NGV + PVGO;$$

the no-growth value of the share is:

$$NGV = EPS/r,$$

where  $EPS$  denotes the future after-corporate-tax earnings per share, assumed to be of the same amount in each future period and assumed to be just sufficient to maintain the value of the shares in a no-growth scenario. The discount rate,  $r$ , can be represented by the current rate of return on a portfolio of stocks in the same risk class as the shares to be valued.<sup>102</sup>

**5.182** PVGO is more difficult to estimate than NGV, because of the need to forecast a corporation's long-term investment plans and the net present values of the returns (that is, profits) from its investments over an indefinite time horizon. The uncertainties about future investments and returns on investment severely limit the applicability of the approach. For example, using heroic assumptions, PVGO could be formulated as:

$$PVGO = NI_1/(r - g),$$

<sup>101</sup>Growth per se is not of value to the shareholder. Value is created if the growth occurs through investments that lead to an  $ROE$  that exceeds the discount rate,  $r$ . Growth stocks are contrasted with *income stocks* for which dividends, rather than capital gains, are the principal form of return to shareholders.

<sup>102</sup> $EPS/r$  is derived from the *sum* of the infinite series of discounted earnings, where the terms in the series are  $EPS/(1+r)$ ,  $EPS/(1+r)^2$ ,  $EPS/(1+r)^3$ , ....  $EPS$  is defined as earnings net of the funds needed to maintain the productivity of the corporation's capital. Fair value estimates can be distorted if allowances for depreciation, which are deducted from taxable earnings, are not representative of the consumption of fixed capital.

where  $NI_1$  denotes the present value of next-period investment and, in this context,  $g$  denotes a constant growth rate for corporate investment in subsequent periods, where  $g$  is equal to the rate of return on  $NI_1$  (and the rate of return on all subsequent investments). Use of these assumptions would seldom, if ever, be satisfactory.

**5.183** Many corporations pass through life cycles that are characterized by an early growth-oriented period in which all or most retained earnings are plowed back (that is, reinvested) in investment projects that have high rates of return, which are unlikely to be sustainable in later years when the corporation has reached a more mature stage. For corporations in the early growth stage and currently not paying dividends, the fair value of unquoted shares can be determined by calculating the *sum* of the present values of the expected earnings in the current and later stages of the corporation's life cycle. Assuming that the discount rates and growth rates for earnings are constant within each stage, but differ across stages, the fair value per share can be calculated as follows:<sup>103</sup>

$$V = \sum_{i=1}^n \frac{EPS_1(1+g_1)^i}{(1+r_1)^i} + \frac{1}{(1+r_2)^{n+1}} \left( \frac{EPS_2}{r_2-g_2} \right),$$

where  $V$  is the fair value per share;  $EPS_1$  and  $EPS_2$  are earnings per share in the first  $n$  periods of high growth and the mature stage for periods  $n+1$  onward;  $g_1$  and  $g_2$  are the earnings growth rates for the two stages; and  $r_1$  and  $r_2$  are the corresponding discount rates. Given the assumed characteristics of corporate performance during the periods,  $EPS_1$  exceeds  $EPS_2$ , and  $g_1$  is larger than  $g_2$ .

**5.184** The discount rates,  $r_1$  and  $r_2$ , can be specified as equal or different. A larger value for  $r_1$  could be specified on the assumption of higher risk and higher capital costs for a corporation in the early stage of operations; a larger value for  $r_2$  could be based on the greater uncertainty about earnings in more distant periods; or a specification of  $r = r_1 = r_2$  could be used on the assumption that the risk premiums in the discount rates are equal, even though the sources of the risks differ. The simplest method is to apply a single discount rate in both the early and later periods, based on the current ROE for a portfolio of

growth stocks for which market price quotations are available.<sup>104</sup>

**5.185** Fair values for shares of corporations that are not currently paying a dividend and are financially distressed are divided into separate categories for the shares of corporations that are expected to be liquidated and shares of corporations that are expected to recover and return to profitability, either independently or through acquisition by another corporation. The fair value of shares of corporations that are facing liquidation is determined as the present value of the residual value that shareholders can reasonably expect to obtain upon dissolution of the corporation (net of any legal or other expenses incurred in obtaining the residual value). The present-value calculations should be based on a market interest rate that represents the shareholder's marginal borrowing rate. In many situations, it is appropriate to record a zero value, given that many failed corporations have no residual value or a small residual value that is negligible when discounted to the present.

**5.186** The fair value of distressed corporations that are expected to regain their financial viability should be based on the present value of the expected earnings stream—possibly, losses in the immediate future followed by earnings in the post-recovery periods. The discount rate should include a substantial risk premium to reflect the fragility of the financial turnaround and the attendant risks borne by the shareholder in the interim.

**5.187** The fair value of the shares of a corporation that will merge with (or will be acquired by) another corporation should be based on the market price of the shares of the corporation to which it will be joined.<sup>105</sup> The other corporation's per-share market price (adjusted for any future dissolution of shares) should be multiplied by the number of shares that the shareholder will acquire after the distribution of the shares of the post-merger corporation. Prior to the announced merger of two corporations that both have

<sup>103</sup>The last term in the equation results from an infinite series— $EPS_2(1+g_2)/(1+r_2) + EPS_2(1+g_2)^2/(1+r_2)^2 + \dots$ , discounted to its present value by using  $[1/(1+r_2)]^{n+1}$ .

<sup>104</sup>Conceptually, the formulation could include more stages—for example, a growth stage, mature stage, and declining stage for the corporation. In practice, it would be extremely difficult, if not impossible, to delineate the time periods for the stages and to specify the expected earnings, discount rate, and growth rate for each stage.

<sup>105</sup>After announcement of the merger/acquisition, the market price of the other corporation's shares should reflect the value of the merger/acquisition, even though the merger has not yet been consummated.

unquoted shares, the fair value of shares can be based on the *sum* of the intrinsic values (that is, discounted cash flows) of the corporations, using the DDM or, if inapplicable, a present-value model based on the discounting of expected earnings. It is recognized that such valuation is very conservative, given that the merger is motivated by the desire to create a corporation that is valued more highly than the pre-merger intrinsic values of the individual corporations. As a practical matter, the situation should arise very infrequently and, if so, should be short-lived. After the merger, market price quotations may become available for the new larger corporation. If not, the fair value of shares would be based on the application of the present-value method to the expected cash flows (dividends or earnings) of the entire post-merger corporation.

#### **A combined approach**

**5.188** Share valuation based on either the MCM or discounted present values may be highly imprecise in some circumstances, given the inherent differences among corporations, uncertainties about future cash flows, and the simplifying assumptions that are needed to specify the discount rates and other factors. To improve the reliability of the estimates, consideration may be given to the calculation of fair values by both approaches, especially if the share valuation by only one method is highly suspect. Use of both methods on a regular monthly basis may be impractical, but it may be feasible on an infrequent basis (for example, annually) for unquoted shares that are held for relatively long periods. Comparing the two valuations, the most conservative estimate of the fair values may be chosen, or may lead to a refinement in the reestimation of whichever model will be used for the reported data. Refinement in the estimation by one approach is recommended in lieu of an estimate that is an average of the fair values obtained by the two methods.

**5.189** It is also recommended that the estimates be analyzed periodically to compare the (1) fair-value estimate, (2) book value of the shares, and (3) original transaction price of the unquoted shares. In general, the book value would be expected to deviate from the fair value, given that market values of healthy corporate shares are often multiples of book values, and market values of distressed corporations are often fractions of book values. Subsequent demand-supply forces in the share markets, as well as many other forces that affect corporate operations and earnings, are likely to

have separated the current fair value from the original acquisition cost of the shares, particularly if considerable time has elapsed since the shares were purchased. Comparison of the fair value estimate, book value, and acquisition cost is recommended only as a reality check to ensure that the fair value is not outside the realm of economic rationality.

#### **Own funds at book value**

**5.190** Historically, book value was a standard concept used widely in both national financial reporting standards and macroeconomic statistics. Today, such valuation is viewed as a minimally acceptable approach for the unquoted shares of a corporation, except in special cases. For example, all equity shares of most central banks are owned exclusively by the governments and therefore are strictly nontraded.<sup>106</sup> Valuation of central bank shares at book value may be deemed as appropriate.

#### **Shares and other equity—liability account for the monetary statistics**

Therefore, this manual recommends that the following valuation principles be used for the components of shares and other equity on the liability side of the sectoral balance sheets described in Chapter VII:

- *Funds contributed by owners* should be book valued—that is, valued as the nominal amount of the proceeds from the initial and any subsequent issuances of ownership shares.
- *Retained earnings* should be valued as the nominal amount of earnings that have been retained.
- *General and special reserves* should be valued as the nominal amount of such reserves.
- *SDR allocations* should be valued on the basis of the market exchange rates as of the balance sheet date.
- *Valuation adjustment* is market valued by definition, given that the valuation adjustment is specifically designed as the net counterpart to changes in the market or fair values of assets and liabilities on the balance sheet. (*MFSM*, ¶214)

<sup>106</sup>Exceptions exist. For example, the United States Federal Reserve System shares are owned by the ODCs that purchase the shares as a Federal Reserve membership requirement. Federal Reserve shares are not traded between ODCs, pay a fixed annual dividend, and can be viewed as preferred shares. Other examples are private-sector-held equity shares in the Reserve Bank of South Africa (traded over the counter, but formerly exchange-traded) and some Bank of Japan shares, which are privately held with longstanding nontraded status.



**5.191** Stocks and flows for *funds contributed by owners, retained earnings, and general and special reserves* are to be recorded in nominal amounts. The *MFSM* recommendation is that *SDR allocations* (applicable only to central banks) should be valued on the basis of the market exchange rates as of the balance sheet date.<sup>107</sup> The stock data for *valuation adjustment* represent the accumulation of all valuation changes recorded directly in shares and other equities (rather than being posted as gains or losses in the profit or loss accounts).

**5.192** The flow data include:

- *Funds contributed by owners.* The nominal amount of proceeds from transactions in the form of issuance of new corporate shares (less own shares purchased and retired); and for quasi-corporations, the inflow or outflow of other equity.
- *Retained earnings.* The nominal amount of retained earnings inflow or outflow from the net profit or loss for the period (recorded as OCVA); transactions (outflows) in the amount of dividends (or dividend declarations prior to the dividend payments).
- *General and special reserves.* The nominal amount appropriated from retained earnings (recorded as OCVA).
- *SDR allocation.* The national currency equivalent for increases (or, though highly unlikely, decreases) in the SDR allocation (recorded as OCVA); and the amount recorded as a revaluation, when the SDR allocation is converted from SDRs to national currency units at the market exchange rate between the national currency and the SDR.
- *Valuation adjustment.* The net amount of asset and liability revaluations for the period, excluding the gains and losses posted to profit or loss—that is, the *sum* of valuation changes for assets *minus* the *sum* of valuation changes for liabilities (other than shares and other equity) and *minus* all valuation changes posted as gains or losses in the profit or loss account.

<sup>107</sup>If separate data on the SDR allocation are not useful, the SDR allocation does not need to be revalued at the market exchange rate. Revaluation of the SDR allocation does not change the value for *shares and other equity* in the aggregate, because both the valuation change for the SDR allocation and the offsetting contra-entry in *valuation adjustment* are recorded within shares and other equity.

## Insurance Technical Reserves

### General principles

**5.193** *The reserve assets that are the counterparts to the net-equity-of-household liabilities of insurance corporations and pension funds should be valued in accordance with the valuation rules for deposits, loans, securities, etc., as already set forth in this section of this chapter.* Data adjustment may be required for the valuation of some types of pension plan assets. IAS 26 states:

Retirement benefit plan investments shall be carried at fair value. In the case of marketable securities[,] fair value is market value. Where plan investments are held for which an estimate of fair value is not possible[,] disclosure shall be made of the reason why fair value is not used. (IAS 26.32)

Those securities that have a fixed redemption value and that have been acquired to match the obligations of the plan, or specific parts thereof, may be carried at amounts based on their ultimate redemption value assuming a constant rate of return to maturity. (IAS 26.33)

**5.194** Liabilities in the form of *net equity of households in life insurance reserves* and *net equity of households in pension funds* are measured as the present value of expected amounts based on actuarial assumptions. Measurement of life insurance and pension plan benefits both involve assumptions of an actuarial nature. Most insurance corporations have in-house actuarial capabilities for the estimation of the net equity of households in life insurance reserves. It is recommended that *pension funds should be encouraged, though not required, to involve a qualified actuary in the measurement of the post-employment benefits.*<sup>108</sup>

**5.195** IAS 19.56 states:

An entity shall determine the present value of defined benefit obligations and the fair value of any plan assets with sufficient regularity that the amounts recognised in the financial statements do not differ materially from the amounts that would be determined at the balance sheet date.

*This principle is endorsed in this Guide.* In IAS 19 and this *Guide*, it is recognized that, in some countries, expected post-pension obligations are revalued on a relatively infrequent basis (for example,

<sup>108</sup>This recommendation is consistent with IAS 19.57.

every three years or even less frequently). This *Guide* recommends that *revaluation should occur as frequently as possible, subject to national convention. For net equity of households in life insurance reserves, monthly or quarterly (or, at most, annual) revaluation should be possible in most circumstances.*

### **Net equity of households in life insurance reserves**

**5.196** *Net equity of households in life insurance reserves should be recorded in the amount of the net present value of all expected future claims of holders of life insurance (excluding term life insurance) policies, based on actuarial techniques that are standard for life insurance corporations. Adjustment of data to a net-present-value basis is likely to be required, given that many national financial reporting standards still embody the measurement of insurance corporations' liabilities on an undiscounted basis.*<sup>109</sup>

**5.197** *This Guide recommends that the rate used to discount insurance liabilities to policyholders should be determined by reference to market yields (at the balance sheet date) on high quality long-term corporate bonds or, if corporate bond yields are unavailable, by reference to market yields on government bonds.*

**5.198** *This Guide recommends that gains/losses arising from the revaluation of net equity of households in life insurance reserves should be recorded in the revenue/expense accounts within profit or loss.*<sup>110</sup>

<sup>109</sup>IFRS 4.15 only stipulates that “An insurer shall assess at each reporting date whether its recognized insurance liabilities are adequate, using current estimates of future cash flows under its insurance contracts.” IFRS 4 embodies Phase I of a two-phase project for the Standard for insurance contracts. *Basis for Conclusions on IFRS 4 Insurance Contracts* (accompanying, but not part of, IFRS 4) provides a preview—“Tentative conclusions for phase II”—which states (¶ BC6) that “. . . (a) The approach should be an asset-and-liability approach that would require an entity to identify and measure directly the contractual rights and obligations arising from insurance contracts . . . (b) Assets and liabilities arising from insurance contracts should be measured at their fair value . . . (c) As implied by the definition of fair value: (i) an undiscounted measure is inconsistent with fair value. . . .” Substantial research has recently dealt with fair values for assets and liabilities of life and nonlife insurance corporations; for example, see Vanderhoof and Altman (2000).

<sup>110</sup>This recommendation is consistent with the liability adequacy test in IFRS 4.16: “. . . (b) If the test shows that the liability is inadequate, the entire deficiency is recognized in profit or loss.”

### **Net equity of households in pension funds**

**5.199** *Net equity of households in pension funds should be calculated in two steps: using actuarial techniques to reliably estimate the amount of post-employment benefits that employees have earned in return for their service in current and prior periods and, discounting of those benefits to determine the present value of the defined benefit obligations. Implementation of these steps requires a number of assumptions and projections, as enumerated in IAS 19.73:*

Actuarial assumptions are an entity's best estimates of the variables that will determine the ultimate cost of providing post-employment benefits. Actuarial assumptions comprise:

- (a) demographic assumptions about the future characteristics of current and former employees (and their dependents) who are eligible for benefits. Demographic assumptions deal with matters such as:
  - (i) mortality, both during and after employment;
  - (ii) rates of employee turnover, disability and early retirement;
  - (iii) the proportion of plan members with dependents who will be eligible for benefits; and
  - (iv) claim rates under medical plans; and
- (b) financial assumptions, dealing with such items as:
  - (i) the discount rate . . . ;
  - (ii) future salary and benefit levels . . . ;
  - (iii) in the case of medical benefits, future medical costs, including, where material, the cost of administering claims and benefits . . . ; and
  - (iv) the expected rate of return on plan assets.

**5.200** *This Guide endorses the recommendations contained in IAS 19.78 regarding the choice of the discount rate to be used in calculating the present value of expected benefits:*

The rate used to discount post-employment benefit obligations (both funded and unfunded) shall be determined by reference to market yields at the balance sheet date on high quality corporate bonds. In countries where there is no deep market in such bonds, the market yields (at the balance sheet date) on government bonds shall be used. The currency and term of the corporate bonds or government bonds shall be consistent with the currency and estimated term of the post-employment benefit obligations.

**5.201** IAS 19.64 states:

An entity shall use the Projected Unit Credit Method to determine the present value of its defined benefit obligations and the related current service cost and, where applicable, past service costs.

*This Guide endorses, but does not require, the use of the Projected Unit Credit Method (also known as the “accrued benefit prorate on service method” or “benefit/years of service method”) in determining the amount of net equity of households in pension funds.<sup>111</sup>*

**5.202** Additions to *net equity of households in pension funds*, which arise from period-to-period changes in the present value of the pension obligations, constitute transactions for which the contra-entries are recorded as expenses in the form of employee compensation.

**5.203** Special consideration is given to pension funds that currently are unfunded or heavily underfunded and for which the current amount (if any) in *net equity of households in pension funds* substantially understates the present value of pension obligations. Many national financial reporting standards are in transition to requiring the full funding of previously unfunded, or heavily underfunded, defined-benefit plans. For many corporations in some countries, an immediate lump-sum addition to *net equity of households in pension funds* with an accompany contra-entry in profit or loss would result in large net losses for the corporations, which, if transferred to equity, would lead to small, or even negative, book values for total equity in the corporations. The reporting of a zero or negative book value of equity (which constitutes technical insolvency of a corporation) may not be permitted by law or national regulatory/supervisory standards.

**5.204** This *Guide* recommends that, *if feasible*, net equity of households in pension funds *should be recorded in the full amount of the present value of estimated pension obligation. Otherwise, it is recommended that ongoing additions should be made to net equity of households in pension funds in accordance with national policy for transitioning to full accounting for obligations arising from pension funds.*

#### **Prepayment of insurance premiums**

**5.205** This *Guide* recommends that *prepayments of insurance premiums should be recorded on a nominal basis, using straight-line prorating of the premium payment over the period covered by the prepayment.*

<sup>111</sup>The Projected Unit Credit Method is described and illustrated with examples in IAS 19.65.

Most non-life insurance premiums are paid for short-term insurance coverage, often on a semiannual basis but sometimes monthly, quarterly, or annually. Consideration should be given to discounting the relevant flows only if the premium prepayment applies to coverage for several years.

**5.206** The insurance premium prepayment may include a deposit component. If unbundled from the insurance contract,<sup>112</sup> the deposit component is classified within the deposit accounts (on a non-prorated basis), and only the remainder—prepayment *minus* the deposit component—is included in *prepayment of insurance premiums* (on a prorated accrual basis).

#### **Reserves against outstanding claims**

**5.207** This *Guide* recommends that *reserves against outstanding claims should be recorded as the present value of the nominal amount of such claims. The discount rate used in calculating the present value should be a market interest rate of a maturity that reflects the average period over which the claims are expected to remain outstanding.*<sup>113</sup>

#### **Financial Derivatives**

*A financial derivatives contract is a financial instrument that is linked to a specific financial instrument, indicator, or commodity, and through which specific financial risks (such as interest rate risk, currency, equity and commodity price risk, credit risk, etc.) can be traded in their own right in financial markets. The value of a financial derivative derives from the price of an underlying item, such as an asset or index. No principal amount is advanced that has to be repaid, and no investment income accrues. (MFSM, ¶176)*

The two broad types of financial derivatives are forward-type contracts and option contracts. (MFSM, ¶177)

#### **General principles**

**5.208** This section contains model-based formulations for the valuation of only the most common types of financial derivatives—that is, those that are sometimes referred to as *plain vanilla* derivatives because of their relatively uncomplicated features.

<sup>112</sup>Deposit components in insurance contracts are described in Chapter 4.

<sup>113</sup>Alternatively, multiple discount rates can be used in the present-value formulation.

Financial derivatives contracts with more complex features—including those often called *exotic*—can be valued through modification or extension of the derivative pricing models described in this section. For a more thorough coverage of the pricing models for financial derivatives, the reader should consult one or more of the many textbooks (and computer softwares) on the pricing and investment analysis for financial derivatives.

**5.209** This *Guide* recommends that an *exchange-traded or an over-the-counter financial derivative should be valued on the basis of market price, whenever a price quotation that reflects an active market trade is available for the reference date.*<sup>114</sup> Fair value methods need to be applied whenever market price quotations for the financial derivatives are unavailable or unrepresentative of an active market.<sup>115</sup>

**5.210** In the monetary and financial statistics, the fair values of financial derivatives are based on the same valuation models that are used by investors for calculation of theoretical, or model-based, values that can be compared with the market values of the financial derivatives, as inputs to their investment decisions, and with valuation of derivatives for which market prices are unavailable.<sup>116</sup> Only use of the valuation models for approximating market values is relevant for the purposes of this *Guide*.

**5.211** Valuation of financial derivatives by fair value methods requires a set of basic assumptions about the financial markets and the market participants. The valuation models are based on assumptions that apply to *some* buyers and sellers, but *not necessarily all* participants in the financial markets. It is assumed that at least some market participants are

<sup>114</sup>No attempt is made to quantify the concept of an *active market*, which ideally comprises many buyers and sellers and a large volume of trading. IAS 36.6 (as well as IAS 38.8 and IAS 41.8) states that “An *active market* is a market in which all the following conditions exist: (a) the items traded within the market are homogeneous; (b) willing buyers and sellers can normally be found at any time; and (c) prices are available to the public.”

<sup>115</sup>Some over-the-counter derivatives, though not exchange-traded, may have price quotations provided by financial derivatives dealers who specialize in the contracts and that can be used in place of fair value estimates.

<sup>116</sup>FCs and other originators of both exchange-traded and over-the-counter derivatives need to determine the initial offer price for derivatives contracts. Futures exchanges are also involved in determining the initial offer prices for contracts. Valuation of exchange-traded derivatives can be based on market prices as soon as active trading has resulted in market price quotations.

not subject to transaction costs when trading financial derivatives or the assets underlying the derivatives contracts and are subject to the same tax rate on all net trading profits. It is also assumed that some market participants qualify for borrowing at the risk-free rate of interest and that the trading activities of the market participants lead to no persistence of arbitrage opportunities in the relevant financial markets.

**5.212** In some cases, the fair value computations for a financial derivatives contract may need to be undertaken by only one party to a contract—if the holder of the contract is able to obtain a current fair value quotation from a counterparty who already has undertaken the sometimes complex task of estimating the model-based fair value of the contract.

**5.213** In this section, interest rates used in compounding or discounting cash flows are expressed on a continuously compounded basis, as commonly used in valuation models for financial derivatives. Compounding and discounting at continuously compounded rates are described in Table 5.5.

**5.214** National currency values are determined in the same manner for all foreign-currency-denominated financial derivatives. The market or fair values of stocks of financial derivatives are calculated in foreign currency units and then converted to national currency units by using end-period market exchange rates. Transactions in foreign-currency-denominated financial derivatives are converted into national currency units on the basis of the exchange rates applied to the transactions (or the market exchange rate prevailing at the time of the transaction, when an exchange of currency is not part of the transaction).

**5.215** For the expository purposes of this *Guide*, the *contra-entries for valuation changes* for financial derivatives are made in *profit or loss*, which is consistent with the IAS treatment. National financial reporting standards may stipulate that *contra-entries for valuation changes* for some or all financial derivatives can be posted to *shares and other equity*.

**5.216** For the description of the horizontal adding-up requirements for the financial derivatives data, it is assumed that  $OCVA = 0$  and, therefore,  $CS = OS + T + VC$ . In the accounts of an individual FC, OCVA entries would arise mainly from default on the performance of a financial derivatives contract—a relatively unlikely event. It is recommended that a *defaulted*

**Table 5.5. Compounding and Discounting at Continuously Compounded Rates**
**Definitions**

The *future value (FV)* for an amount  $A$  invested for  $N$  years at a continuously compounded rate  $R$  is:

$$FV = Ae^{RN},$$

where  $e^{RN}$  is the *compounding factor*; and  $e$  ( $= 2.71828$ ) is the base of the natural logarithm ( $\ln$ )—that is, if  $y = \ln x$ , then  $x = e^y$ .  $N$  is an integer or decimalized number of years (for example,  $N = 0.25$ ,  $N = 0.37$ ,  $N = 1$ ,  $N = 1.4$ ,  $N = 2.31$ , etc.), where  $N = (\text{days until the cash flow})/(\text{days in a year})$ .

The *present value (PV)* of a future amount  $A$  discounted at a continuously compounded rate  $R$  for  $N$  years is:

$$PV = Ae^{-RN},$$

where  $e^{-RN}$  (or expressed as  $1/e^{RN}$ ) is the discounting factor.

Conversions between a continuously compounded rate ( $R_c$ ) and an  $m$ -times-per-year-compounded rate ( $R_m$ ) and vice versa are made using:

$$R_m = m(e^{R_c/m} - 1) \text{ and } R_c = m \ln[1 + (R_m/m)].$$

**Examples**
**Combining forward rates in successive periods**

Using continuously compounded rates, the average annual rate for a period is the arithmetic average of the successive annual rates within the period. Suppose one- and two-year forward rates of 10.5 percent are followed by a third-year forward rate of 11.4 percent. Then the three-year forward rate,  $R$ , is 0.108, where  $R = (0.105 + 0.105 + 0.114)/3$ . The three-year ( $N = 3$ ) compounding factor is  $e^{RN} = e^{(0.108)(3)} = 1.382647$ .

**Present value formulations**
**• Zero-coupon security**

$$PV = Ce^{-RN},$$

where  $C$  is the cash flow (repayment),  $N \leq 1$  for a security with remaining maturity of one year or less, and  $N > 1$  for a bond with a maturity of more than a year.

**• Coupon bond with time-variant discount rates**

$$PV = C_1e^{-R_1t_1} + C_2e^{-R_2t_2} + \dots + C_Ne^{-R_Nt_N},$$

where  $C_i$  is the cash flow in period  $i$  (that is, a coupon payment or, for period  $N$ , the coupon payment plus repayment); and  $t_1, t_2, \dots, t_N$  measure the time span in years (for example, 0.5, 1.0, 1.5) until the future cash flows will be realized.

**Forward contracts**

**5.217** Determination of the forward price of an investment asset depends on the income flows, if any, from the asset. Separate formulas are needed for investment assets that, during the life of the forward contract, (1) *provide no income* to the asset holder, (2) *provide one or more lump-sum income payments* (for example, bond coupon payments or stock dividend payments), or (3) *provide a specified rate of return, or yield*. Equations for the *forward price* of the asset and the *value of a forward contract* in the asset are needed for each of the three specifications—that is, no income, lump-sum income, or a specified yield on the investment asset.

**5.218** Notation in the valuation equations for forward contracts includes:<sup>117</sup>

$N$ : *Time until delivery or cash settlement* of a forward-type contract, or time to expiration of an options contract (in years<sup>118</sup>);

$S_0$ : *Spot price* (that is, current price) of the underlying asset in a forward contract;

$F_0$ : *Current price of the forward contract*;

$K$ : *Delivery price* for the underlying asset; and  
 $r$ : *Risk-free rate of interest* per annum, which represents the continuous-compounded rate of return on a risk-free investment of  $N$ -year maturity.

**5.219** The relationship between the *forward price* ( $F_0$ ), *current (spot) price* ( $S_0$ ), and *risk-free rate of interest* ( $r$ ) is:

- *Forward price of an asset with no income payments (through time  $N$ ):*

$$F_0 = S_0e^{rN};$$

- *Forward price of an asset with one or more income payments:*

$$F_0 = (S_0 - I)e^{rN};$$

where  $I$  denotes the *present value* of all income payments through time  $N$ ; and

- *Forward price of an asset with a known yield:*

$$F_0 = S_0e^{(r-q)N},$$

*derivatives contract should be reclassified as a bad loan, accompanied by inclusion in provisions for loan losses (with a contra-entry for the expense within profit or loss) until the contract is written off or otherwise liquidated.* These entries appear as OCVA.

<sup>117</sup>The model formulations and most notation are taken from Hull (2003).

<sup>118</sup> $N$  may be an integer (one year, two years, etc.), but more often is a fraction of a year that is expressed in decimalized form (for example,  $N = 0.5$  for a six-month contract;  $N = 63/365 = 0.1726$  for a 63-day contract).

where  $q$  denotes average yield per annum with continuous compounding.

**5.220** The value of a forward contract—denoted by  $f$ —is determined by relating the forward price ( $F_0$ ) to the delivery price ( $K$ ) in the forward contract. The value of a long forward contract ( $f_L$ )—that is, a forward purchase of an asset—and the value of a short forward contract ( $f_S$ ) for the forward sale of an asset are:

$$f_L = (F_0 - K)e^{-rN} \text{ and } f_S = (K - F_0)e^{-rN}.$$

**5.221** Using the equations for the forward prices ( $F_0$ ), the values of long forward contracts in investment assets<sup>119</sup> depend on the income payments (if any) and are:

- Value of a long forward contract for an asset with no income payments:

$$f_L = S_0 - Ke^{-rN};$$

- Value of a long forward contract for an asset with one or more income payments:

$$f_L = S_0 - I - Ke^{-rN},$$

where  $I$  denotes the present value of income payments; and

- Value of a long forward contract for an asset with a known yield:

$$f_L = S_0e^{-qN} - Ke^{-rN},$$

where  $q$  denotes the average annual yield.

**5.222** The values of  $f$  are the same in amount, but opposite in sign, for long and short forward positions—reflecting that the asset position of one party to the contract is the liability position of the other party.

<sup>119</sup>Similar formulations apply to determining forward prices and forward-contract values for consumption assets—that is, commodities that are purchased and physically delivered under forward contracts. Storage costs are relevant for the valuation of forward contracts in consumption assets, whereas income flows are relevant for forward contracts in investment assets. Storage costs may be viewed as negative income flows and may be expressed as lump-sum payments or as proportional to the price of the commodity. Let  $U$  denote the present value of lump-sum storage costs, and  $u$  denote storage costs that are proportional to the commodity price. The forward price and forward contract values for commodities with lump-sum storage costs are obtained by using minus  $U$  (that is,  $-U$ ) in place of  $I$  in the equations for the forward price and forward contract value. When storage costs are proportional to the commodity price, minus  $u$  (that is,  $-u$ ) replaces  $q$  in the equations for the forward price and forward contract value.

- Value of a short forward contract for an asset with no income payments:

$$f_S = Ke^{-rN} - S_0;$$

- Value of a short forward contract for an asset with one or more income payments:

$$f_S = Ke^{-rN} - S_0 + I,$$

where  $I$  denotes the present value of the income payments; and

- Value of a short forward contract for an asset with a known yield:

$$f_S = Ke^{-rN} - S_0e^{-qN},$$

where  $q$  denotes the average annual yield.

**5.223** For a forward contract on currencies,  $S_0$  and  $F_0$  denote the spot price (that is, current price) and forward price of a foreign currency, expressed as exchange rates—that is, number of units of currency A per unit of currency B. Currency A and currency B can be used to purchase interest-bearing assets denominated in currency A and currency B and yielding risk-free rates of return of  $r_A$  and  $r_B$  percent a year (with continuous compounding), respectively. The relationship between the forward price ( $F_0$ ) and the spot price ( $S_0$ ) is:

$$F_0 = S_0e^{(r_A - r_B)N},$$

which is the well-known interest rate parity theorem. This is a specific case of the relationship between  $F_0$  and  $S_0$  for an investment asset with a known yield;  $F_0 = S_0e^{(r-q)N}$ , where  $r \equiv r_A$  and  $q \equiv r_B$ . The relationship is often shown with noncompounded rates; for example, for a forward contract for a U.S. dollar purchase of British pounds in one year:  $F_0 = S_0[(1 + r_{US})/(1 + r_{UK})]$ , where  $r_{US}$  and  $r_{UK}$  are noncompounded annual rates of return on dollar- and pound-denominated investments.

**5.224** The values of a long forward contract and a short forward contract on currencies are:

$$f_L = S_0e^{-r_B N} - Ke^{-r_A N} \text{ and } f_S = Ke^{-r_A N} - S_0e^{-r_B N}.$$

**5.225** At origination of a forward contract, the delivery price ( $K$ ) is set equal to the forward price ( $F_0$ ) so that  $f$  is initially equal to zero for both the long forward (purchase) and short forward (sale) position. Over the life of the forward contract, the value of the forward contract ( $f$ ) changes due to changes in (1) the spot price ( $S_0$ ), (2) the discount factor ( $e^{-rN}$ ), and (3) the present value of income flows (if any) from the under-

lying asset. The value of  $f$  becomes positive (an asset) for the long or short forward position, and negative (a liability) for the other side of the contract. At any time during the life of the contract, the value recorded as an asset of one party should equal the value recorded as a liability by the other party.

**5.226** The change in the forward contract value for the first reporting period is recorded as a *valuation change* ( $VC$ ). In the balance-sheet data, the underlying contra-entry in profit or loss is reflected in *retained earnings*, after the profit or loss for the period has been transferred to *shares and other equity*.<sup>120</sup> For the initial period of the contract, the closing stock ( $CS$ ) shows a financial derivative asset (if  $f > 0$ ) or liability (if  $f < 0$ ) in the amount of the  $VC$  for the period. The horizontal adding-up requirement is:

$$CS = OS + T + VC = VC,$$

given the absence of an opening stock ( $OS$ ) and given that no transactions ( $T$ ) took place during the period.<sup>121</sup>

**5.227** The account entries for the second reporting period depend on the direction and magnitude of movements in the contract value ( $f$ ), as well as on the life of the contract. The possibilities are:

- *The contract value does not change in the second period*—that is,  $VC_2 = 0$ . In this exceptional case, the second-period closing stock ( $CS_2$ ) is the same as the second-period opening stock ( $OS_2$ ). No transactions have occurred and, in particular, no interest has accrued; *no flows from forward contracts (or financial derivatives in general)*<sup>122</sup> are classified as interest income.
- *The second-period change in the contract value is in the same direction (positive or negative) as the first-period change or, if in the opposite direction, does not lead to a switch from an asset position to*

*a liability position or vice versa*. The only second-period flow is the valuation change ( $VC_2$ ), and the adding-up requirement is:

$$CS_2 = OS_2 + VC_2.$$

- *The second-period change in the contract value ( $VC_2$ ) is in the opposite direction from the first-period change in value and is large enough to switch the contract value from a first-period asset position to a second-period liability position*. In the asset account for financial derivatives, a valuation change ( $VC_{2A}$ ) is recorded to close out the asset position, and the remainder of second-period valuation change is recorded as a liability-account valuation change ( $VC_{2L}$ ) for financial derivatives:

$$\text{Asset position: } CS_{2A} = OS_{2A} + VC_{2A} = 0, \text{ where } VC_{2A} = -OS_{2A}.$$

$$\text{Liability position: } CS_{2L} = VC_{2L}, \text{ where } VC_{2L} = -(VC_2 - VC_{2A}). \text{ The minus sign preceding } (VC_2 - VC_{2A}) \text{ converts a "negative asset" to a "positive liability."}$$

The same accounting rules apply to a switch from a liability to an asset:

$$\text{Liability position: } CS_{2L} = OS_{2L} + VC_{2L} = 0, \text{ where } VC_{2L} = -OS_{2L}.$$

$$\text{Asset position: } CS_{2A} = VC_{2A}, \text{ where } VC_{2A} = -(VC_2 - VC_{2L}).$$

- *The forward contract is settled in the second period*. A forward contract can be settled through a cash payment or through the short forward holder's delivery of the underlying asset. Settlement occurs on the delivery date specified in the contract<sup>123</sup> or on an earlier date if the parties decide to close out the contract before maturity.

The cash settlement amount, or payoff, on the delivery date is equal to the difference between the spot price of the asset ( $S_0$ ) on that date and the delivery price ( $K$ ) as specified in the contract.<sup>124</sup> The holder of the long forward position receives a payoff of  $(S_0 - K)$  if the spot price is above the delivery price, or provides a payoff  $(K - S_0)$  if  $K$  is larger than  $S_0$ . The recipient and provider each

<sup>120</sup>Throughout this section, reference is made to contra-entries in the underlying accounts, which include profit or loss accounts. It should be understood that, in the balance sheet statement for the end of period, the profit or loss accounts have been closed, and net profit or loss has been transferred to retained earnings.

<sup>121</sup>It is assumed that the life of the contract extends beyond the period in which it was originated.

<sup>122</sup>In the 1993 SNA, some flows from interest rate swaps and forward rate agreements were classified as *interest income* within the category of *property income*. In a revised SNA treatment of financial derivatives, interest flows directly from financial derivatives do not exist. See Commission of the European Communities and others (2004).

<sup>123</sup>Forward contracts usually specify a delivery date, whereas futures contracts often provide a longer delivery period—for example, a delivery month—and the holder of the short forward contract gets to choose the delivery date.

<sup>124</sup>On the delivery date,  $f = S_0 - Ke^{-rN} = S_0 - K$ .

record a transaction ( $T$ ) in the amount of the payoff (with a contra-entry for the cash receivable/payable) and a valuation change in the amount of the difference between the payoff and the opening stock (with a contra-entry in profit or loss). The adding-up requirement for the asset and liability positions of the respective parties are:

$$CS_2 = OS_2 + T_2 + VC_2 = 0,$$

$$\text{where } VC_2 = T_2 - OS_2 = (S_0 - K) - OS_2.$$

If the contract is settled in the second period, but earlier than on the delivery date in the contract, the same accounting treatment applies, and the settlement transaction is in the amount of the forward contract value ( $f$ ) on that date:  $f = S_0 - Ke^{-rN}$ .

**5.228** The maturity of the forward contract is likely to extend for several months (or even a year or longer) beyond the second reporting period. The account principles described for the second recording period apply to all subsequent periods through the settlement period.

### Futures contracts

**5.229** A futures contract is standardized except for the *futures price* that is specified for the underlying asset in the contract. The negotiation of a futures contract takes place at the futures exchange, through bidding on the futures price to be specified in the contract. The purchaser of a long position in the futures contract, called the *buyer of a futures contract*, agrees to take future delivery of the underlying asset or to a cash settlement based on the difference between the original futures price and the spot price of the asset at the maturity of the contract. The acquirer of the short position in the futures contract, called the *seller of a futures contract*, agrees to make future delivery of the underlying asset or a cash settlement based on the difference between the original futures price and the spot price of the asset on the delivery date.

**5.230** The opening stock ( $OS$ ) and closing stock ( $CS$ ) for futures contracts are always zero, given that the futures contract price at inception is zero and that any gain or loss in the value of the futures contract is settled on a daily basis. Accounting for a futures contract involves the recording of flows—transactions and valuation changes—in the category of financial derivatives, accompanied by stock and flow entries for the margin deposit account established as a prerequisite to the purchase or sale of a futures contract.

**5.231** Market price quotations for futures contracts are available for every day that the futures exchange is open. Daily price quotations for an individual futures contract, as published in the financial press (or obtained directly from the exchange or broker) show the (1) *commodity or financial asset* and *delivery month*, (2) *exchange* where traded, (3) *contract size*, (4) *pricing unit*, (5) *opening price* for the day, (6) *highest and lowest price* for the day, (6) *settlement price* (a representative price near the end of the day), (7) *change* (in price) for the day, (8) *highest and lowest price* over the life of the contract, and (9) *open interest* (number of outstanding contracts).

**5.232** *Change* (in price) is the quotation to be used in accounting for the daily changes in value for the futures contracts, and the transactions for the daily settlements. For a reporting period, the valuation change ( $VC$ ) and the transactions ( $T$ ) from the daily settlements are:

$$VC = \sum_{t=1}^m (\text{change})_t \text{ and } T = -VC,$$

where  $(\text{change})_t$  is the price change for the  $t$ th trading day in a reporting month with  $m$  trading days. Given that  $OS = CS = 0$  from the daily settlement, the identity for the stocks and flows is

$$CS = OS + T + VC = (-VC) + VC = 0.$$

**5.233** Alternatively, the flow data can be obtained from the transactions data for the daily settlements, as recorded in the account statement from the broker with whom a margin account is maintained. At the time of purchase or sale of a futures contract, the investor must post *initial margin*—a specified percentage of the contract purchase/sale price in a *repayable margin deposit account*. The broker posts the daily settlement amounts to the investor's margin account—that is, an increase in the margin account when the daily price change for the futures contract is positive, or a decrease when the daily price change is negative.

**5.234** For the reporting period, the transactions ( $T$ ) and valuation change ( $VC$ ) are:

$$T = \sum_{t=1}^m (\text{cash})_t \text{ and } VC = -T,$$

where  $(\text{cash})_t$  is the amount of the daily settlement (positive or negative).



**5.235** Only the daily settlement transactions posted to the margin account are relevant. The balance in the margin account may vary as a result of other transactions. In particular, the investor may be required to deposit additional funds—called *margin maintenance*, or *variation margin*—if daily settlements from decreases in the value of the futures contract drain a substantial proportion of the funds from the initial margin account. Similarly, the investor may be permitted to make a deposit withdrawal from the margin account, if cash inflows from the daily settlements have resulted in a substantial increase in the margin account balance.

**5.236** The vast majority of futures contracts do not lead to delivery, and most are closed out prior to the delivery date. To close out a contract, the holder of a long futures position simply acquires a short position of equal size (that is, sells the same number of contracts as those in the long position held). By engaging in a such sale or purchase of the opposite position in the futures contract, both the long and short position in the futures contract are eliminated from the investor's accounts, and the investor is entitled to close out the margin account.

**5.237** For the reporting period in which the contract is closed out (on the delivery date or earlier),  $VC$  and  $T$  are the cumulative amounts from the daily settlements up to the close-out day within the reporting period.

**5.238** Additional accounting is required if the asset is delivered under the futures contract. For FCs, the relevant contracts are nearly always long and short positions in financial futures.<sup>125</sup> In many cases, the FC holding the short position in a financial asset needs to purchase the asset in the market and then deliver the asset to the holder of the long futures position. Suppose an FC will deliver a financial asset with a market price of  $x$ , under a futures contract with an exercise price of  $y$ , which is less than  $x$ .

- *Cash (or deposit) account*. Transaction for the purchase of the asset:  $-x$ .
- *Cash (or deposit) account*. Transaction for the payment on delivery:  $y$ .
- *Futures contract account (liability)*. Valuation change after last daily settlement:  $-(x - y) = (y - x)$ .

<sup>125</sup>Delivery by an FC holding a short position in commodity futures is unusual; delivery to an FC with a long position in a commodity futures contract would be extraordinary.

- *Futures contract account closeout*. Transaction after last daily settlement:  $-(y - x)$ .
- *Profit or loss accounts*. Contra-entry for loss on the futures contract:  $(x - y)$ .

**5.239** If the FC will deliver an asset that is currently held in its asset portfolio, the first step is to value the asset at the market price at the time of delivery. Let  $z$  denote the value for the financial asset as currently recorded in the accounts. The  $z$  value may have been established from the revaluation at the end of the preceding reporting period or from subsequent revaluation—for example, if the asset has been subject to daily mark-to-market valuation. At the time of delivery, the financial asset should be revalued in  $x$  amount, a valuation change in  $(x - z)$  amount should be recorded for the asset, and a contra-entry in  $(x - z)$  amount should be posted to the profit or loss accounts. To close out the financial futures contract through delivery, the following entries are made:

- *Financial asset (deliverable) account*. Transaction for the transfer of ownership of the asset to the holder of the long futures contract:  $-x$ .
- *Cash (or deposit) account*. Transaction for the payment on delivery:  $y$ .
- *Futures contract account (liability)*. Valuation change after last daily settlement:  $-(x - y) = (y - x)$ .
- *Futures contract account closeout*. Transaction after last daily settlement:  $-(y - x)$ .
- *Profit or loss accounts*. Contra-entry for loss on the futures contract:  $(x - y)$ .

The accounting entries for the financial futures contract itself are the same whether the settlement was made by acquiring the asset from the existing asset holdings of the FC or in the market at time of delivery.

**5.240** For the FC holding the long futures position and taking delivery of an asset with an exercise price of  $y$ , the accounting entries are:

- *Financial asset (delivered) account*. Transaction for the transfer of ownership of the asset to the holder of the long futures contract:  $x$ .
- *Cash (or deposit) account*. Transaction for the payment on delivery:  $-y$ .
- *Futures contract account (asset)*. Valuation change after last daily settlement before the delivery date:  $(x - y)$ .
- *Futures contract account*. Transaction after last daily settlement before the delivery date:  $(y - x)$ .

- *Profit or loss accounts.* Contra-entry for the gain on the futures contract:  $(x - y)$ .

### Forward rate agreements (FRAs)

**5.241** This subsection describes the valuation and recording of stocks and flows for a *forward rate agreement* (FRA), which is one of three common types of swap agreements—the *FRA*, *interest rate swap*, and *currency swap*. Accounting for interest rate and currency swaps is described in later subsections of this chapter.

**5.242** An FRA is an over-the-counter agreement to apply, as of today (at time  $N_0$ ), a specific interest rate to a notional principal ( $L$ ) for a specified future period, which is defined as the time interval (expressed in decimalized years) between time  $N_1$  and time  $N_2$ . Notation for the interest rates used in the valuation of an FRA are:

- $R_K$  Interest rate to be applied, as specified in the FRA;
- $R_F$  Forward LIBOR interest rate for the time interval between  $N_1$  and  $N_2$ ;
- $R$  Actual LIBOR interest rate observed at future time  $N_1$  for a maturity  $N_2$ ; and
- $R_2$  LIBOR zero (that is, zero-coupon) rate for a maturity  $N_2$ .

The compounding frequency for  $R_K$ ,  $R_F$ , and  $R$  corresponds to the term to maturity ( $N_2 - N_1$ ), whereas  $R_2$  is a continuous-compounded rate. If  $N_2 - N_1 = 0.25$  (that is, one-fourth of a year),  $R_K$ ,  $R_F$ , and  $R$  have quarterly compounding frequency; if  $N_2 - N_1 = 0.5$ , the rates have semiannual compounding frequency, etc.

**5.243** For the recipient of the payment based on  $R_K$ , the value of the FRA is:

$$V_{FRA} = L(R_K - R_F)(N_2 - N_1)e^{-R_2 N_2}.$$

**5.244** For the provider of the payment based on  $R_K$ ,  $V_{FRA}$  has the opposite sign:

$$V_{FRA} = L(R_F - R_K)(N_2 - N_1)e^{-R_2 N_2}.$$

**5.245** An FRA can also be valued by assuming that the forward rate will be realized—that is, by assuming that  $R = R_F$ —and by substituting  $R$  for  $R_F$  in the equations above. Using this approach, an FRA can

be treated as equivalent to an interest rate swap that has only one exchange of fixed-rate payment for floating-rate payment—that is,  $R_F L$  swapped for  $RL$ .

**5.246** An FRA usually has zero value at inception, because  $R_K$  is usually set equal to the forward rate ( $R_F$ ) at the outset of the contract. As  $R_F$  changes over the life of the FRA, the  $V_{FRA}$  equations are used to calculate the current value of the FRA. The end-of-period value of  $V_{FRA}$  is recorded as a valuation change ( $VC$ ) that constitutes the closing stock ( $CS$ ) for the FRA: that is,  $CS = VC = V_{FRA}$ .

**5.247** An FRA is usually settled at time  $N_1$ , when the amount of the cash settlement already can be determined from the available rate data. At time  $N_1$ , the actual LIBOR rate ( $R$ ) for a LIBOR loan of  $(N_2 - N_1)$  maturity becomes available and can be used to calculate the FRA cash flows at time  $N_2$  and to discount the cash flows back to time  $N_1$ . The cash settlement received or paid is recorded as a transaction ( $T$ ) with a contra-entry for the cash received or paid. The closing stock for the reporting period is:

$$CS = OS - T - VC = 0,$$

and  $VC$  is the amount of the change in  $V_{FRA}$  in the presettlement period within the reporting period.

### Interest-rate-swap contracts

**5.248** An *interest rate swap* is an agreement that fixed-rate payments by one party are to be swapped for floating-rate payments by the other party. The notional principal,  $L$ , is the amount to which a fixed rate and a floating rate are applied for calculating the cash flows—that is, the amount of the swapped payments. This section describes the valuation and recording of stocks and flows for the two most common types of swap—*interest rate swaps* and *currency swaps*.

**5.249** Notation in the valuation formulas for interest rate swaps includes:

- $L$  Notional principal in the swap agreement;
- $t_i$  Time until the  $i$ th payments ( $i = 1, \dots, n$ ) are exchanged;
- $r_i$  LIBOR zero rate (that is, zero-coupon rate)<sup>126</sup> corresponding to time  $t_i$ ;

<sup>126</sup>Swap agreements can be based on floating rates other than LIBOR, but swapping fixed-rate payments for LIBOR-based payments is prevalent and, therefore, is used in the exposition.

- $k$  Amount of fixed payment at the end of each payment period;
- $k_i^*$  Amount of floating-rate payment at the end of the  $i$ th payment period, which is a known amount as of the beginning of the  $i$ th period.

**5.250** For valuation purposes, an interest rate swap can be viewed as a long position in one bond and a short position in another bond. One party is viewed as having a long position in a fixed-rate bond and a short position in a floating-rate bond, and the other party is viewed as having the opposite positions in the two bonds. For the provider of fixed-rate payments (and the floating-rate payment recipient), the value of the swap ( $V_{swap}$ ) is equal to the difference between the floating-rate bond value ( $B_{fl}$ ) and the fixed-rate bond value ( $B_{fix}$ ):

$$V_{swap} = B_{fl} - B_{fix}$$

and for the party with the opposite position,

$$V_{swap} = B_{fix} - B_{fl}$$

**5.251** The value of a fixed-rate bond,  $B_{fix}$ , is equal to the sum of the discounted value of all future payments plus the discounted value of the notional principal, which is expressed as:

$$B_{fix} = \sum_{i=1}^n k e^{-r_i t_i} + L e^{-r_n t_n}$$

**5.252** The current value of the floating-rate bond,  $B_{fl}$ , depends on the timing of the resetting of the floating interest rate and the length of time until the next payment will be made. The interest rate is reset to the current LIBOR zero rate at the beginning of each payment period and is applied to the notional principal for the entire payment period. *Immediately after a payment*, the value of the floating-rate bond,  $B_{fl}$ , is equal to the notional principal,  $L$ .

**5.253** *Immediately before the next payment*,  $B_{fl} = L + k_i^*$ , where the amount of the next payment,  $k_i^*$ , has been known since the beginning of the payment period. On a date within the  $i$ th payment period, the value of the floating-rate bond is given by:

$$B_{fl} = (L + k_i^*) e^{-r_i t_i}$$

**5.254** The accounting entries for the interest rate swap in the financial derivatives account (asset or liability) depend on whether payments have been exchanged during the reporting period and/or whether  $V_{swap}$  has switched from a positive value (asset position) to a negative value (liability) or vice versa.

**5.255** Suppose the interest rate swap did not switch from an asset to a liability position, or vice versa, during the reporting period. The accounting entries for the reporting period are:

- *If no payments have been exchanged* during the reporting period,  $V_{swap}$  as of end of the period is recorded as the closing stock ( $CS$ ), and the valuation change ( $VC$ ) is the amount by which  $V_{swap}$  changed during the period—that is,  $VC = CS - OS$ , given that  $T = 0$ .
- *If payments have been exchanged* during the reporting period, the total flow for the period is divided into two components: a transaction ( $T$ ) for the net swap payment/receipt (with a contra-entry to cash), and a valuation change ( $VC$ ) to account for the post-payment change in  $V_{swap}$  in the latter part of the reporting period, after the net swap payment/receipt.  $OS$  and  $CS$  are the beginning-of-period and end-of-period values of  $V_{swap}$ , respectively;  $T$  is the amount of the net swap payment/receipt; and  $VC$  can be derived residually, using  $VC = CS - OS - T$ .

**5.256** Suppose  $V_{swap}$  switched from a positive value (asset) to a negative value (liability) or vice versa during the reporting period. The same accounting principles as described for a forward contract that switched from an asset to a liability (or vice versa) would apply for an interest rate swap.

### Currency swaps

**5.257** A *currency swap* is an agreement to exchange payments in one currency for payments in another currency. For a *fixed-for-fixed currency swap*, fixed interest rates—a separate fixed rate for each side of the swap—are used in determining the amounts of the payments that are to be exchanged. For a *fixed-for-floating currency swap* (also referred to as a *cross-currency interest rate swap*), fixed-rate payments in one currency are exchanged for floating-rate payments in another currency. The valuation and stock/flow recording for a fixed-for-fixed currency swap is described in this section. For a *fixed-for-floating currency swap*, the accounting treatments for an interest rate swap and a fixed-for-fixed currency swap can be combined in a relatively straightforward way.

**5.258** The valuation principles for a fixed-for-fixed currency swap and an interest rate swap are similar in that the value of the swap can be derived as the difference between the values of two bonds. For

the currency swap, both principal and “interest”<sup>127</sup> are exchanged. For a currency swap, two *actual principals*—one on each side of the contract—are exchanged at the beginning and end of the swap contract, whereas an interest rate swap has a single *notional principal*.

**5.259** Notation used in valuing a currency swap (in the absence of credit risk) include:

- $S_0$  Spot exchange rate expressed in number of currency-A units per currency-B unit;
- $L_A$  Principal for payments in currency A;
- $L_B$  Principal for payments in currency B;
- $r_{Ai}$  Forward rate (that is, zero rate with continuous compounding) in Country A;
- $r_{Bi}$  Forward rate (that is, zero rate with continuous compounding) in Country B;
- $r_A$  Fixed interest rate for the bond (that is, principal) denominated in currency A;
- $r_B$  Fixed interest rate for the bond (that is, principal) denominated in currency B;
- $k_A$  Payment in currency A in exchange for  $k_B$ , where  $k_A = r_A L_A$ ; and
- $k_B$  Payment in currency B in exchange for  $k_A$ , where  $k_B = r_B L_B$ .

The principals,  $L_A$  and  $L_B$ , are usually approximately equal in amount, when expressed in units of the same currency—that is, so that  $L_A$  is approximately equal to  $S_0 L_B$ .

**5.260** If currency A is received and currency B is paid, the currency-A value of the currency swap is the difference between the value of the currency-A bond ( $B_A$ ) and the value of the currency-B bond ( $B_B$ ), both expressed in units of currency A:

$$V_{swap} = B_A - S_0 B_B.$$

If currency A is paid and currency B is received, the currency-A value of the swap is:

$$V_{swap} = S_0 B_B - B_A.$$

*Denominated in currency B*, the values are:

$$V_{swap} = (1/S_0)B_A - B_B \text{ and } V_{swap} = B_B - (S_0)B_A.$$

<sup>127</sup>The quotation marks are to emphasize that the amounts for the exchanged payments are based on interest calculations, but the payments are not recorded as interest income or expense. The payment exchange affects the swap value ( $V_{swap}$ ), and changes in  $V_{swap}$  are recorded as valuation changes.

**5.261** The values of  $B_A$  and  $B_B$  are the present values of the bonds—that is, the sums of the present values of the payments to be made ( $k_A$  or  $k_B$ ) and the principals to be returned at maturity, using time-variant discount factors that are based on  $r_{Ai}$  and  $r_{Bi}$  for ( $i = 1, 2, \dots, n$ ):

$$B_A = \sum_{i=1}^n k_A e^{-r_{Ai} t_i} + L_A e^{-r_{A} t_n} \text{ and } B_B = \sum_{i=1}^n k_B e^{-r_{Bi} t_i} + L_B e^{-r_{B} t_n}.$$

**5.262** Currency swaps usually are structured so that, at inception,  $V_{swap}$  is equal to zero. At the outset of the contract, the principals are exchanged, and each party records the resulting increase/reduction in currency-A holdings and the corresponding reduction/increase in currency-B holdings. No other initial transactions are needed if the exchanged principals have equal value—that is, if  $d = L_A - S_0 B_B = 0$ . If  $d$  has a nonzero value, a cash settlement from the party providing the principal of lesser value is required. The cash settlement is made in either currency (or a third currency), as agreed by the parties. If a later cash settlement of the initial principal exchange is agreed between the parties, the present value of the future payment is included in the value of the currency swap.

**5.263** For the first reporting period, the change in the value of the currency swap is recorded as a valuation change ( $VC$ ) with a contra-entry in profit or loss. Assuming  $V_{swap} = 0$  at inception and that no payments (other than the initial principal exchange) were made during the first reporting period, the adding-up requirement is:

$$CS = VC (= V_{swap}).$$

For subsequent reporting periods, the adding-up requirement is:

$$CS = OS + T + VC,$$

where  $T$  denotes the net amount from the exchange of payments. For computational convenience,  $VC$  can be derived as a residual:

$$VC = CS - OS - T,$$

using the data for  $OS$ ,  $T$  (that is, the net swap payment), and  $CS$  (that is, the amount calculated for  $V_{swap}$  at the end of the reporting period). The contra-entry for  $T$  is reflected in the increase or decrease in currency holdings, arising from the payment exchange. The contra-entry for  $VC$  is reflected in retained earnings, after having been posted to profit or loss.

**5.264** Over its life, the currency swap is likely to switch from a positive value (asset) to a negative value (liability) or vice versa. If  $V_{swap}$  switches signs during the reporting period, the accounting entries are analogous to those for an interest rate swap or forward contract that switches from an asset to a liability, or vice versa.

### Options contracts

**5.265** The valuation of options contracts that are exchange traded is straightforward, given that market prices for the contracts are generally available. Similarly, options dealers may provide market-price quotations for some types of over-the-counter options contracts. For other over-the-counter options, pricing models—that is, valuation methods—is a vast subject that cannot be fully covered in this *Guide*. In the absence of market-price data, empirical models are needed for valuing options contracts in several categories—stock options, bond options, futures options, caps and floors, exotic options, etc. Within these categories, valuation of call and put options is addressed separately in the empirical modeling, and separate valuation models for European and American-type options (see Chapter 4) usually are needed. For stock options, separate models are needed for the valuation of options on non-dividend- and dividend-paying corporate shares.

**5.266** Exploration into the empirical models for the valuation of options contracts is further broadened by the ongoing refinement of the existing empirical models, along with the development of new models, within the academic community and in the FCs that participate in the options markets.

**5.267** The most widely used empirical methods for valuation of options contracts are:

- *Black-Scholes options pricing model*. The best-known empirical model for options pricing, the basic Black-Scholes model<sup>128</sup> applies directly to the pricing of European and American call options and European put options on non-dividend-paying corporate shares. Variants of the Black-Scholes model have been developed for the pricing of dividend-paying stock options, bond options, and many other types of European and American options. The Black-Scholes approach to options

pricing and the basic stock-option valuation equations are presented in Table 5.6.

- *Binomial-tree model*. This model is an extension<sup>129</sup> of the two-state binomial model—an options-pricing model in which it is assumed that, over any short period, a stock price will move to one of only two possible values. The two-state binomial model has been extended in a multiperiod framework in which the price of an option can take many possible paths (that is, follow different branches of a pricing “tree”) during the many short periods over the life of the option.<sup>130</sup> The binomial tree model can be used for the valuation of a variety of options contracts—as an alternative to the Black-Scholes model for some options, as well as for options contracts for which the Black-Scholes model is inapplicable or difficult to apply.

**5.268** Users of this *Guide* may wish to consult one or more textbooks or other references on options pricing and analysis.<sup>131</sup> Major sources for the preparation of this *Guide* were Don M. Chance, *An Introduction to Derivatives & Risk Management* (see Chance, 2004); and John C. Hull, *Options, Futures, and Other Derivatives* (see Hull, 2003).<sup>132</sup> Proprietary and nonproprietary computer software for options pricing is also prevalent. FCs that are counterparties to options contracts that need to be fair-valued, as well as brokers who arrange the contracts, may be able to provide option price estimates, options valuation software, or other useful support.

**5.269** In using the Black-Scholes pricing formulas for European options on shares, most data—in particular, on current stock prices, strike prices, and risk-free rates—should be readily available. The exception is the data for the measure of stock price variability,

<sup>129</sup>Cox, Ross, and Rubinstein (1979).

<sup>130</sup>The binomial-tree model is more aptly described as a set of computational procedures than a set of formulas. Fundamental to these pricing procedures is the concept of a *replicating portfolio*—a perfectly hedged portfolio of assets with the same payoff as an option (or set of options) and with a more direct valuation than the option. For a description and numerical examples of the binomial-tree model, see Chance (2004), Chapter 4; and Hull (2003), Chapter 10.

<sup>131</sup>In addition to valuation methods, the textbooks contain substantial coverage of investment decision making, hedging strategies, etc. Only the materials on options pricing models and valuation methods for other types of over-the-counter derivatives are directly applicable in the context of monetary and financial statistics.

<sup>132</sup>For information on other books on financial derivatives, including many devoted exclusively to options pricing and investment, see Chance (2004), Appendix B, References, pp. 620–37.

<sup>128</sup>Black and Scholes (1973) and Merton (1973).

$\sigma$ , which is given by the annualized standard deviation of the continuously compounded rate of return on the stock. This standard deviation must be estimated as accurately as possible, because the call and option prices obtained from the Black-Scholes formulas are highly sensitive to the estimate of  $\sigma$ .<sup>133</sup>

**5.270** Even though the derivation is for the pricing of European call and put options on non-dividend-paying corporate shares, the Black-Scholes pricing formula in Table 5.6 can be directly used to value American call options on non-dividend-paying corporate shares. The American call options can be treated the same as European call options, given that an in-the-money American call option on non-dividend-paying shares is seldom exercised prior to the expiration date.

**5.271** Modified versions of the Black-Scholes model can be applied to the valuation of European call options on dividend-paying shares. It is necessary to assume that the amount and timing of the dividend (or dividends) to be paid during the life of the option are known, or that the dividend is paid continuously at a known constant rate (that is, assuming an annualized continuously compounded dividend yield) over the life of the option. The first assumption often is appropriate for pricing options on an individual stock, whereas the second assumption is particularly useful for pricing options on a stock index for a portfolio of dividend-paying stocks. In the modified Black-Scholes formulas, the current stock price ( $S_0$ ) in the call option price formula is replaced by  $S_0$  minus the present value of the dividends that will be paid, either at a point in time or continuously over the life of the option.<sup>134</sup>

<sup>133</sup>The standard deviation can be calculated using daily or monthly data on the continuously compounded rate of return on the stock. Daily or monthly standard deviations are obtained by applying the standard formula for a standard deviation (unbiased estimate of the population standard deviation) to the daily or monthly data, respectively. To obtain the annualized standard deviation, a daily standard deviation is multiplied by the square root of  $N$ , where  $N$  is the number of trading days in a year (approximately 250); and a monthly standard deviation is multiplied by the square root of 12.

<sup>134</sup>The continuous-dividend version of the model is also used for the pricing of European call options on currencies. The model sometimes is called the Garman-Kohlhagen model after Mark B. Garman and Steven W. Kohlhagen, who first recognized that the modified Black-Scholes model directly applied, because of the similarity between a continuous-dividend-paying stock and a currency that pays interest at a continuously compounded rate. See Garman and Kohlhagen (1983), pp. 231–37.

**Table 5.6. Black-Scholes Model for Pricing European Stock Options**

Assumptions:

- The stock is non-dividend-paying.
- The risk-free rate of interest ( $r$ ) and the variance ( $\sigma^2$ ) of the rate of return on the stock are constant over the life of the option.<sup>1</sup>
- Trading in the stock is continuous.
- The stock price is continuous—that is, no jumps in the price occur, for example, from announcement of expected events for the corporation that issued the stock—and the stock is divisible into arbitrarily small units.<sup>2</sup>
- No transaction costs or taxes apply to trading in the stock or the stock option.

The values of a European call option and a European put option are:

$$\text{Call option value} = C = S_0 N(d_1) - Ke^{-rT} N(d_2)$$

and

$$\text{Put option value} = P = Ke^{-rT} N(-d_2) - S_0 N(d_1),$$

where

$$d_1 = \frac{\ln(S_0 / K) + (r + \sigma^2 / 2)T}{\sigma\sqrt{T}}$$

and

$$d_2 = \frac{\ln(S_0 / K) + (r - \sigma^2 / 2)T}{\sigma\sqrt{T}} = d_1 - \sigma\sqrt{T}.$$

$S_0$  is the current stock price (that is, at time zero),  $K$  is the strike price in the options contract,  $r$  is the continuously compounded risk-free interest rate,  $\sigma$  is the stock price volatility (that is, annualized standard deviation of the continuously compounded rate of return), and  $T$  is the time to maturity of the call or put option.

The function  $N(x)$  is the cumulative probability distribution for a standardized normal distribution—that is, the probability that a variable with a standard normal distribution with zero mean and unit variance ( $= 1$ ) will be less than  $x$ . For example,  $N(d_1)$  is the area under a normal distribution up to the value of  $d_1$ . The Microsoft Excel software has a built in function,  $\text{NORMDIST}(d_1)$ , to use in calculating  $N(d_1)$ .

<sup>1</sup>Formulas using the assumption that  $r$  and  $\sigma^2$  are perfectly certain functions of time are also available.

<sup>2</sup>More complex formulations for stock returns that are subject to “jumps” (discontinuity) are available.

**5.272** Modified versions of the Black-Scholes model are somewhat more complex for the pricing of American call options on a dividend-paying stock (or on a stock index). The binomial-tree model is the

**Table 5.7. Black Model for Pricing European Options on Bonds, Swaps, and Other Interest Rate Instruments<sup>1</sup>**

Assumptions and notation:

- The European option is on a variable  $V$ —that is, the value of the underlying bond, interest rate swap, etc.—that has a lognormal distribution for which the standard deviation of  $\ln V_T$  is equal to  $\sigma\sqrt{T}$ .
- The expected value of the variable,  $E(V_T)$ , is equal to the value of  $F$  at time zero, where  $F$  is the forward price of  $V$  for an options contract with maturity  $T$ .
- The expected payoff for the option is  $E(V_T) N(d_1) - KN(d_2) = F_0 N(d_1) - KN(d_2)$ .
- Discounting is at the continuously compounded risk-free rate.

The values of a European call option and a European put option are:

$$\text{Call option value} = P(0, T)[F_0 N(d_1) - KN(d_2)]$$

and

$$\text{Put option value} = P(0, T)[KN(-d_2) - F_0 N(-d_1)],$$

where

$$d_1 = \frac{\ln(F_0/K) + \sigma^2 T/2}{\sigma\sqrt{T}}$$

and

$$d_2 = \frac{\ln(F_0/K) - \sigma^2 T/2}{\sigma\sqrt{T}} = d_1 - \sigma\sqrt{T}.$$

$F_0$  is the value of  $F$  at time zero,  $V_T$  is the value of  $V$  at time  $T$ ,  $P(t, T)$  is the price at time  $t$  of a zero-coupon bond paying \$1 at time  $T$ ,  $\sigma$  is the volatility of  $F$  (that is, annualized standard deviation of the continuously compounded variable),  $N(x)$  is the cumulative probability distribution for a standardized normal distribution (zero mean and unit variance), and  $T$  is the time to maturity of the call or put option.

<sup>1</sup>This class of models is called the *Black model* because of the similarities to the pricing model in Black (1976).

pricing model most widely used by participants on the options markets.

However, variants of the Black-Scholes model—in particular, procedures by Black, Roll, Geske, and Whaley—sometimes are used.<sup>135</sup>

**5.273** The binomial-tree model and other numerical methods are also the most popular methods for the

<sup>135</sup>For a description of the procedures and references to their papers, see Hull (2003), pp. 254–56 and p. 265.

valuation of put options on equity—both no-dividend and dividend-paying shares. In exceptional cases, the Black-Scholes formula for European put options pricing can be applied to the pricing of an American put option on dividend-paying shares, given that dividends reduce the incentive for early exercise of put options. It has been shown that exercise of an American put option for a period immediately prior to an ex-dividend date is never worthwhile, and that a put option should never be exercised early if the amount of the dividend is sufficiently large relative to the strike price for the option.

**5.274** Variants of the Black model—a general model in the Black-Scholes tradition—can be used to value interest rate derivatives of the European options type. The general model, described in Table 5.6, can be modified for the pricing of a European bond option—that is, an option to buy (call option) or sell (put option) at a stated price and on a specified date—or of an option on an interest rate swap (called a “swaption”). Variants of the model also are available for valuing interest rate caps, interest rate floors, and interest rate collars.<sup>136</sup> The basic Black model is shown in Table 5.7.

**5.275** A number of advanced models exist for valuing interest rate options. These models are sometimes called *term-structure models*, because changes in interest rates through time are within the modeling assumptions, making these models more appropriate for the valuation of American-type swap options, callable bonds, and structured notes.<sup>137</sup> A subclass of these models is interest-rate tree models, which are analogous to the binomial-tree models for pricing stock options. Interest rate trees allow for changes in the discount rate from period to period, whereas stock price trees assume that the discount rate is constant. The interest rate option models usually are

<sup>136</sup>An *interest rate cap* is an option contract that has a payoff when the reference rate—an interest rate on an underlying floating rate note—exceeds a specified level. An interest rate cap can be characterized as a portfolio of call options on interest rates, or as a portfolio of put options on zero-coupon bonds. An *interest rate floor*, which provides a payoff when the reference rate falls below a specified rate, is a portfolio of put options on interest rates or a portfolio of put options on zero-coupon bonds. An *interest rate collar* is a combination of a long position in a cap and a short position in a floor.

<sup>137</sup>*Structured notes* are a category of variable-rate debt securities with atypical interest rate formulas. Examples are (1) *range-floater notes* for which a higher coupon is paid only if the reference rate is within a specified range; (2) *inverse-floating rate notes* for which the coupon rate moves inversely to the reference rate; and (3) *leveraged-rate notes* for which the floating rate formula is, for example, 1.5 times the reference rate.

based on trinomial trees, whereas the stock option models often use binomial trees (although stock option pricing models with trinomial trees exist). Descriptions and valuation formulas for these and other more advanced models for interest rate options are contained in Hull (2003), Chapters 23 and 24.

**5.276** Pricing models for the various types of exotic derivatives include variants of the Black-Scholes and Black models, as well as numerical procedures such as binomial- and trinomial-tree models. Pricing equations for several types of exotic derivatives are contained in Hull (2003), Chapter 19.

**5.277** Accounting for an option begins with the recording of the market or fair value of the call or put option purchased (an asset) or sold (a liability)—that is, the premium paid (option purchase) or premium received (option written)—with a contra-entry for the cash (currency or deposit) payment or receipt.<sup>138</sup> Under national financial reporting standards, the asset or liability position is likely to be marked to market value on a daily or other frequent basis. If not, the asset or liability position should be revalued at the current market price or fair value at the end of each reporting period.

**5.278** The asset or liability position in the option is “derecognized” (that is, removed from the asset and liability accounts) when the option is sold, exercised, or expires on an out-of-the-money (unexercised) basis. Exchange-traded call and put options, like other financial assets, can be resold in the secondary market.<sup>139</sup> A sales transaction is recorded in the financial derivatives account with a contra-entry for the cash (currency or deposit) received and, if applicable, an additional contra-entry for a realized gain or loss in the amount of any difference between the sale price and the value recorded at the time of the option sale.

<sup>138</sup>In atypical cases, the option premium may not be paid until the option is exercised or expires. At the time of purchase/sale, the option is recorded as an asset or liability in the full amount of the premium (that is, option value) with a contra-entry in the liability or asset category of loans, if the deferred premium payment is interest bearing, or as an other account payable/receivable for a non-interest-bearing deferral of the premium payment (even if an implicit interest element is reflected in the option premium).

<sup>139</sup>Resale transactions—called *offsetting orders* or simply *offsets*—account for a substantial proportion of the transactions for exchange-traded options. The over-the-counter markets usually have no facilities for selling back the options. Over-the-counter options are usually purchased with the intention of being held to expiration.

**5.279** For an option that expires on an out-of-the-money (unexercised) basis, the option is derecognized by marking the value of the option to zero and recording a corresponding loss (on a asset position) or gain (on a liability position). If marked to market on a frequent basis, the recorded values for an out-of-the-money option will show the decline in value to zero on the expiration date.

**5.280** The value of an option has two components: an *intrinsic value* and a *time value*. The *intrinsic value* of an option is the value of the option if exercised immediately. The *time value* of an option is the value that derives from the potential for favorable movements in the price of the underlying asset during the remaining life of the option. For a call option, the intrinsic value is the maximum of the market value of the underlying asset ( $S$ ) minus the strike price ( $K$ ) at which the option holder can exercise an in-the-money option; or is zero, if the current market value of the underlying asset is below the strike price (that is,  $S - K < 0$ ). For a put option, the intrinsic value is the maximum of  $K$  minus  $S$ ; or is zero, if the option is currently out of the money (that is,  $K - S < 0$ ). As expiration approaches, the time value of an option declines because of shrinkage of the time remaining for favorable movements in the market value of the underlying asset. At expiration, only the intrinsic value—either an in-the-money payoff or a zero value—remains.

**5.281** The accounting for the exercise of an option is the same whether the option is exercised at maturity or prior to the expiration date (applicable to American options). The contra-entries for the settlement of the options contract are determined by the type of financial assets provided at settlement. Cash settlement is required for some options contracts (for example, options on stock indices), and delivery of the underlying asset is required for other options contracts (for example, exchange-traded stock options). For some over-the-counter options contracts, cash settlement or delivery of the underlying assets can be negotiated by the parties to the contracts.

**5.282** Close-out transactions, or settlement,<sup>140</sup> of in-the-money options contracts take the form of

<sup>140</sup>*Settlement* is used in referring to (1) daily settlement of ongoing financial derivative contracts (for example, daily payments under futures contracts), (2) periodic settlements (for example, exchange of payments under interest rate and currency swaps), or (3) final settlement, or closeout, of financial derivatives contracts. Only final settlement is relevant for standard types of options contracts.



either cash settlement or delivery of the underlying asset specified in the options contract. The delivered asset may be purchased in the market at the time of settlement or may have been acquired earlier—for example, by the writer of a covered call option that is being exercised.

**5.283** The accounting for the financial derivatives account (asset or liability) is the same regardless of whether the settlement is in cash<sup>141</sup> or through delivery of the underlying asset. The settlement, or payout, is recorded as an increase in deposits (cash settlement) or in the category of assets delivered (for example, shares or other equity, securities other than shares, or currency). The option account within the asset or liability category for financial derivatives is reduced by the value of the settlement. The *call-option payoff* (*COP*) is equal to the difference between the current market price of the underlying asset,  $S$ , and the strike price,  $K$ ; the *put-option payoff* (*POP*) is equal to the difference between the strike price and the market price of the asset:

$$COP = S - K \text{ and } POP = K - S.$$

**5.284** The entries in the options account are  $T = -COP$  and  $T = -POP$  for call-option and put-option settlement transactions, respectively. The valuation change for the reporting period is derived from the adding-up requirement such that the closing balance is zero (that is,  $CB = OB + T + VC = 0$ ), and therefore the valuation change is given by  $VC = -OB - T$ . Stated in the underlying variables, the valuation changes for the reporting period for a call and put option, respectively, are:<sup>142</sup>

<sup>141</sup>The cash settlement normally is in the form of a transferable deposit, but can be made in currency. In some cases, the “cash” settlement is in form of other financial assets for which the value is equal to the amount of cash owed. For expository purposes, all cash payments and receipts are assumed to be reflected in the deposit holdings of the cash provider and cash recipient.

<sup>142</sup>Let  $V_{opt}$  denote the value of a call option contract as recorded in the accounting records at the time of exercise of the option. The options contract may have been marked to market value on a daily basis such that  $V_{opt}$  is the current market or fair value at the time of the exercise of the call option. Alternatively,  $V_{opt}$  may be above or below the current value of the options contract, for example, if the options contract has not been revalued since the beginning of the reporting period. The accounting procedures for recording of the settlement do not depend on the current valuation of the options contract, because the valuation change ( $VC$ ) for the entire reporting period is calculated residually.  $VC$  has two parts: any cumulative revaluation in the reporting period up to the time of settlement and any final revaluation at the time of settlement. The components are:  $V_{opt} - OS$  and  $S - K - V_{opt}$ , and  $VC = (V_{opt} - OS) + (S - K - V_{opt}) = S - K - OS$ , respectively.

$$VC = -OS + COP = S - K - OS, \text{ where} \\ COP = -T = S - K; \text{ and}$$

$$VC = -OS + POP = K - S - OS, \text{ where} \\ POP = -T = K - S.$$

**5.285** The  $T$  and  $VC$  entries are the same for the two parties to the options contract. The entries appear in the *asset category* of financial derivatives in the accounts of the party that is exercising the call or put option. The entries appear in the *liability category* of financial derivatives in the accounts of the other party, who delivers the underlying asset when the call option is exercised, takes delivery of the underlying asset when the put option is exercised, or makes the payment, if cash settlement is used.

**5.286** The entries and contra-entries for cash settlement or underlying asset delivery are:

- *Cash settlement of a call or put option (for example, an option on a stock index).* The recipient of the settlement records the transaction in the options account with a contra-entry in deposits in the amount of the payoff, *COP* or *POP*. The settlement provider records the options-account transaction and a reduction in deposit holdings. The valuation change ( $VC$ ) is entered in the options account with a contra-entry in the valuation section of the profit or loss accounts.
- *Delivery of an underlying asset acquired by the provider at the time of delivery.* The recipient (of the underlying asset) records the market value of the asset,  $S$ , in the asset account (for example, delivered shares recorded in the asset category of shares and other equity). The payment for the shares comprises two parts; a cash payment (that is, reduction in deposits) in the amount of the strike price,  $K$ ; and the surrender of the options contract, which is terminated when exercised. By exercising the option prior to expiration (for example, exercise of an American option on a dividend-paying stock), the call-option holder has chosen to forfeit the future time value of the option. When exercised, a call or put option has its intrinsic value—that is, *COP* for a call option or *POP* for a put option. If the options contract is exercised on the expiration date, the value of the option will have declined to its intrinsic value on that date. In either case, the transaction in the options account is *minus COP* or *minus POP*. The asset provider records the transaction for the purchase of the deliverable asset, in amount  $S$ , with a correspond-

ing reduction in cash, immediately followed by the delivery of the asset and a reduction in the asset account in the amount  $-S$ . Alternatively, the asset can be acquired and directly delivered without ever entering the accounts—that is, without recognizing and immediately derecognizing the asset. For the options account within financial derivatives (liability), a transaction in the amount of *minus* the intrinsic value of the option and a valuation adjustment in the amount required to result in a zero value for *CS* is recorded. The asset provider records the receipt of a deposit in the amount of the exercise price, and enters the amount of the options transaction and valuation change to close out the options account.

- *Delivery of an underlying asset already held by the provider at the time of delivery.* The writer of a call option who is delivering an underlying asset already may own the asset to be delivered—that is, may have written a covered call option that is exercised. Similarly, the holder of a long position in a put option may hold the asset that subsequently is to be put (that is, delivered) to the put-option writer. If the held-for-delivery asset has not already been marked to its current market value, it should be revalued (at a value of  $S$ ) at the time of delivery, and any valuation change should be recorded in the account for that asset (that is, *not* in the liability account for the options contract). The other entries for the close-out of the options contract liability and for the deposit received in the amount of the strike price are the same as in the case in which the asset had been acquired at the time of delivery. For the recipient of the asset, all accounting entries are the same as in the case where the asset was acquired by the provider at the time of delivery. The recipient is only concerned with the delivery and recording of the asset, irrespective of the time or means of acquisition of the asset by the provider.

### Employee stock options

**5.287** *Employee stock options* usually are nontradable and therefore must be fair-valued. Pricing can be based on the Black-Scholes model, numerical procedures such as a binomial-tree model, or some other model. The pricing model should take account of the special features of employee stock options, in particular:

- *Option life.* The options are often long-term and may not have a specified expiration date. Employee

stock options may be somewhat similar to long-term equity anticipation securities (LEAPS), which are stock options with maturities of up to three years. However, some employee stock options have maturities of 10–15 years or even longer.

- *Stock dividends.* The options may be on dividend-paying or non-dividend-paying stock, and a separate pricing model is needed in each case.
- *Grant and vesting dates.* The employee receives the stock options on the *grant date*, but often cannot exercise the stock options prior to a subsequent *vesting date*. Options that start at some time in the future—called forward start options—are usually structured so that the options are “at the money” when they start—that is, vest. For a non-dividend-paying stock, it can be shown that, in a risk-neutral world, the value of the forward start option is the same as the value of a regular at-the-money option with the same life as the forward start option.
- *New or outstanding shares.* The value of the options depends on the source of the shares that will be delivered when the options are exercised. If the corporation intends to issue new shares when the options are exercised, employee stock options have similarities to warrants that corporations issue on their own shares. The Black-Scholes pricing model is applicable to warrants if some adjustments are made for the dilution of share value when the new shares are issued.<sup>143</sup> Similar adjustments are needed in applying the Black-Scholes formula to the pricing of employee stock options that, when exercised, will result in issuance of new shares.

**5.288** Employee stock options should be recognized on the balance sheet. The time of recognition can be determined by the national accounting standard, assuming that inclusion on the balance sheet is specified in the standard. Recognition may occur as of a particular date—the grant date, vesting date, or a date between the grant and vesting date—or may be spread over the period between the grant and vesting date. In the methodology of this *Guide*, any of these timings for recognition of the options is acceptable, but postponing the recognition until the vesting date is least preferred.

**5.289** The initial recording of employee stock options in the category of financial derivatives is the same as

<sup>143</sup>See Hull (2003), pp. 249–50.

the recording for regular (that is, nonemployee) call options written by a corporation, but the contra-entries differ. For the regular stock option, the contra-entry is for the cash received, whereas the contra-entry for employee stock options is an expense. Depending on the national financial reporting standards, the expense may be treated either as an expense in the period when the option is recognized on the balance sheet or may be amortized over future accounting periods. The preferred approach is to treat the options as a current expense, particularly if the initial recording of the options is on the vesting date or is spread over the period between the grant and vesting dates.

### Other Accounts Receivable/Payable

*Other accounts receivable/payable include (1) trade credit and advances and (2) other. (MFSM, ¶179)*

#### Trade credit and advances

**5.290** As defined in this *Guide* (see Chapter 4), trade credit and advances should exclude all interest-bearing receivables/payables (which are classified as loans)<sup>144</sup> but should include trade credits that have implicit interest rates arising from discounts for early payments. The recommendation in this *Guide* is to *record trade credit at the discounted invoice amount, based on the premise that the discount usually will be viewed as significant, leading the trade credit recipient normally to make payments within the discount period*. If payment is made within the discount period, the transaction entries for the reduction in trade credit receivable/payable and the entry for cash or other type of payment are recorded in the discounted amount of the invoice.

**5.291** If the invoice is not paid in time to qualify for a discount, the trade credit recipient (that is, the payer) should record (1) the payment of the full invoice amount, (2) a decrease in trade credit in the

<sup>144</sup>Classification based on a zero explicit interest applies only to trade credit—that is, credit that suppliers of goods and services provide on a wholesale basis. In some countries experiencing low market interest rates, retailers of automobiles and other consumer durables sometimes provide zero-interest loans to consumers. Such credit, which does not qualify as trade credit, should be classified in the category of loans in the retailer’s books, taking into account two components: an amount representing the market price for a cash purchase of the consumer good, and an amount representing an implicit interest expense. A market interest rate on consumer credit of comparable maturity can be used in calculating the implicit interest cost.

amount of the discounted invoice (that is, the amount originally recorded in other accounts payable), and (3) an expense in the amount of the discount. The trade credit provider (that is, the payee) records the payment in the original invoice amount, the reduction in trade credit in other accounts receivable, and a revenue entry in the amount of the discount that was forgone by the trade credit recipient. The expense/revenue in the amount of the discount is classified as interest expense/revenue, rather than as part of the cost of the goods or services that gave rise to the trade credit receivable/payable. Even though trade credit is defined to exclude all trade credit that bears explicit interest, trade credit discounts give rise to entries for interest expense or interest revenue, if the discount is forgone. This accounting for the interest cost is used to exclude trade discounts (whether taken or not) in measuring the purchase cost of inventory, plant, and equipment—as specified, for example, in the IFRSs (see IAS 2.11 and IAS 16.16).

**5.292** Special treatment arises in exceptional cases of long-term trade credits. The recommendation in this *Guide* is that *for zero-interest trade credit of longer maturity, the treatment in 1993 SNA, ¶3.80, be applied*.<sup>145</sup>

When the time gap [billing period] becomes unusually long and the amount of trade credit extended is very large, the conclusion may be that implicitly an interest fee has been charged. In such extreme cases, the actual payment or payments should be adjusted for accrued interest in order to arrive at the correct value of the asset transferred. Such adjustments are not recommended for normal trade credit.

Designation of an “unusually long” (for example, six-month or one-year) billing period and “very large” trade credit should be determined in the national context.

#### Other accounts receivable/payable—Other

**5.293** Valuation in nominal amount is applied for most subcategories, including settlement accounts, items in the process of collection, provisions for losses on impaired financial assets, accumulated depreciation and impairment losses on nonfinancial assets, and most categories of miscellaneous asset and liability items. The *IMF quota subscrip-*

<sup>145</sup>This treatment is consistent with the recommendations in the *External Debt Statistics Guide* (see Bank for International Settlements and others, 2003, ¶2.36 and ¶2.38).

tion (applicable to the central bank only) should be valued on the basis of market exchange rates at the balance sheet dates, and contra-entries for valuation changes should be recorded in *valuation adjustment* within shares and other equity. *Provisions—liabilities* (within *miscellaneous liability items*) should be valued as the best estimate of the expenditure required to settle the present obligation at the balance sheet date.<sup>146</sup> The best estimates of *provisions—liabilities* should be reviewed and, if appropriate, adjusted at each balance sheet date. Depending on national financial reporting standards, the contra-entries for *provisions—liabilities* can be recorded as an expense in the profit or loss accounts or in *valuation adjustment* within shares and other equity.

### Nonfinancial Assets

*Nonfinancial assets*—Entities over which ownership rights are enforced by institutional units, individually or collectively, and from which economic benefits may be derived by their owners by holding them, or using them over a period of time. Nonfinancial assets consist of tangible assets, both produced and nonproduced, and intangible assets for which no corresponding liabilities are recorded. Produced assets comprise nonfinancial assets that have come into existence as outputs from production processes. Produced assets consist of (1) fixed assets—assets that are used repeatedly, or continuously, in production processes for more than one year and that may be tangible (dwellings, other buildings and structures, machinery and equipment, and cultivated assets, such as livestock for breeding and plantations) or intangible (mineral exploration, computer software, and entertainment, literary, or artistic originals), (2) inventories (materials and supplies, work-in-progress, finished goods, and goods for resale), and (3) valuables (assets that are acquired and held primarily as stores of value). Nonproduced nonfinancial assets are both tangible and intangible assets that come into existence other than through processes of production. Tangible nonproduced assets include land, subsoil assets, water resources, and noncultivated biological resources. Environmental assets over which ownership rights have not been or cannot be enforced (open seas or air) are outside the asset boundary of the *SNA*. Intangible nonproduced assets include patents, leases, and purchased goodwill. (*MFSM*, ¶425)

**5.294** Nonfinancial assets are a component of the monetary statistics in only a limited sense. Accurate

<sup>146</sup>Estimation of such expenditures is described in IAS 37.36–41.

data on nonfinancial assets are required for satisfying the adding-up requirements for stock and flow data in the balance-sheet framework of the monetary statistics. For analytical purposes, however, the stocks and flows for financial assets and liabilities are the primary focus of the monetary statistics.

**5.295** For the monetary statistics, the recommendation is that the *nonfinancial assets data consist of the FC's accounting data, as compiled in accordance with the national financial reporting standards*. In particular, the data should be based on the national financial reporting standards for valuation of produced and nonproduced nonfinancial assets, including the nationally authorized methods for the depreciation of property, plant, and equipment. In the national financial reporting standards of many countries, depreciation allowances are not representative of the consumption of fixed capital, which is the economically meaningful concept that the *1993 SNA* specifies for the estimated opportunity costs of using fixed assets. Depreciation allowances for fixed assets may be based primarily on tax and economic policy considerations rather than on the useful lives of the nonfinancial assets and their replacement costs.<sup>147</sup> No adjustment for depreciation methods that are currently used, even those that deviate substantially from the concept of consumption of fixed capital, is required for the compilation of the monetary statistics. The carrying amount of a nonfinancial asset in the form of property (including intangible assets such as goodwill, but excluding inventory), plant, or equipment is defined as the asset acquisition cost less the accumulated depreciation and, if applicable, impairment losses for the asset.

**5.296** The national financial reporting standards may contain specific treatment for impairment losses on nonfinancial assets. Definitions in ¶6 of IAS 36—*Impairment of Assets* include:

<sup>147</sup>According to IAS 16.62: “A variety of depreciation methods can be used to allocate the depreciable amount of an asset on a systematic basis over its useful life.” The methods include the straight-line method (a constant charge over the useful life), the diminishing-balance method (a decreasing charge over the useful life), and the sum-of-units method (a charge based on expected use or output). The depreciation charge for the period is usually recognized as an expense. Accelerated depreciation allowances, which are not based on the useful lives of the assets, are sometimes allowed as a tax incentive to promote investment in fixed assets. Application of accelerated depreciation is not consistent with the concept of consumption of fixed capital.

A *cash-generating unit* is the smallest identifiable group of assets that generate cash inflows that are largely independent of the cash inflows from other assets or groups of assets. . . .

*Fair value less costs to sell* is the amount obtainable from the sale of an asset or a cash-generating unit in an arm's-length transaction between knowledgeable, willing parties, less the costs of disposal.

An *impairment loss* is the amount by which the carrying amount of an asset or a cash-generating unit exceeds its recoverable amount.

The *recoverable amount* of an asset or a cash-generating unit is the higher of its fair value less costs to sell and its value in use. . . .

**5.297** *Impairment losses and accumulated depreciation* are separate, but related, accounts. IAS 36.63 states: "After the recognition of an impairment loss, the depreciation (amortization) charge for the asset shall be adjusted in future periods to allocate the asset's revised carrying amount, less its residual value (if any), on a systematic basis over its remaining useful life." For the monetary statistics, the accounts are combined in the single category of *accumulated depreciation and accumulated impairment losses on nonfinancial assets*.<sup>148</sup>

**5.298** For the monetary statistics, the data on nonfinancial assets can be reported either on a gross basis or a net basis (that is, gross nonfinancial assets *less* accumulated depreciation and impairment losses on nonfinancial assets). If nonfinancial assets are reported on a gross basis (valued at acquisition cost), accumulated depreciation is reported in a separate category within *Other accounts payable—other*. Impairment losses on nonfinancial assets are subsumed within the category.

**5.299** Nonfinancial assets do not enter directly into the flow data in the financial statistics, which encompass only the transactions in the financial assets and liabilities presented in the financial account of the *1993 SNA* and the flow of funds accounts. However, accurate data on the production, acquisition, disposal, and consumption of nonfinancial assets are needed for analysis of the linkages between the financial account and the other accounts (in particular, the capital account) of the

<sup>148</sup>These accounts do not explicitly appear in the financial statistics.

*1993 SNA*.<sup>149</sup> In addition, stock data for nonfinancial assets are needed for the *1993 SNA* balance sheets that contain accounts for both financial and nonfinancial assets. The recommendation is that *for the financial statistics, the nonfinancial assets data be compiled in accordance with the 1993 SNA methodology*. (See Chapter 8 of this *Guide*.)

## Other Accounting Issues

### Time of Recording: Trade Date and Settlement Date Accounting

This manual and the *1993 SNA* recommend recording transactions at the time of the change in ownership of a financial asset (that is, when all rights, obligations, and risks are discharged). Therefore, in principle, the two parties to a transaction should record it simultaneously. (*MFSM*, ¶225)

**5.300** In the methodology of the monetary and financial statistics, a financial asset transaction is to be recorded on the *trade date* (that is, the time of change in ownership of a financial asset)<sup>150</sup> rather than on the *settlement date*<sup>151</sup> (that is, the time of delivery of the financial asset). On the *trade date*, both parties record the transaction to reflect the delivery of the noncash asset, if delivery actually occurred, or *as if* delivery of the noncash asset took place, if later delivery is scheduled.

**5.301** In this *Guide*, the *trade date for a loan* is defined as the date on which the accrual of interest commences<sup>152</sup> (except in the special case of loans

<sup>149</sup>In the integrated set of macroeconomic accounts of the *1993 SNA*, *net lending/borrowing*—that is, net acquisition of financial assets *minus* net incurrence of liabilities, as shown in the financial account—is linked to the *capital account*, which shows the values of nonfinancial assets acquired, or disposed of, by resident institutional units by engaging in transactions to show the change in net worth due to saving and capital transfers.

<sup>150</sup>Delivery is required of both parties to a transaction. For example, a securities seller must deliver the securities, and the securities buyer must deliver cash (that is, the payment for the securities). In the interim between the trade and settlement dates, the securities are treated *as if* delivered, which is reflected in the securities holdings of each party. A contra-entry is made in the *settlement accounts* within *other accounts receivable/payable*. The cash accounts (that is, deposits) of the buyer and seller are not affected until the cash delivery (that is, payment) is actually made.

<sup>151</sup>IAS 39.AG56 states: "The settlement date is the date that an asset is delivered to or by an entity."

<sup>152</sup>IAS 39.AG55 states: "The trade date is the date that an entity commits itself to purchase or sell an asset. Trade date accounting refers to (a) the recognition of an asset to be received and the

with grace periods before the payment of interest commences).<sup>153</sup> For example, a loan agreement may be signed on an earlier date, but the loan commences on the date when the borrower receives the funds. A borrower rarely would be required to incur interest charges prior to receiving the funds; therefore, the trade date and settlement date are the same.<sup>154</sup>

**5.302** Among interest-bearing assets, securities other than shares is a major category for which trade dates often precede settlement dates. Noncoincidence of trade and settlement dates also is common for transactions in non-interest-bearing financial assets such as equity shares.

**5.303** In the IFRSs, a corporation can record financial asset transactions on the trade dates or the settlement dates. IAS 39.38 states:

A regular way purchase or sale of financial assets shall be recognised and derecognised, as applicable, using trade date accounting or settlement date accounting (see Appendix A paragraphs AG53–AG56).

**5.304** A regular way contract is defined in IAS 39.9:

A *regular way purchase or sale* is a purchase or sale of a financial asset under a contract whose terms require delivery of the asset within the time frame established generally by regulation or convention in the marketplace concerned.

In IAS 39.AG54, a regular way contract is contrasted with a derivative, as follows:

A contract that requires or permits net settlement of the change in the value of the contract is not a regular way

---

liability to pay for it on the trade date, and (b) the derecognition of an asset that is sold, recognition of any gain or loss on disposal, [and (c)] the recognition of a receivable from the buyer for payment on the trade date. Generally, interest does not start to accrue on the asset and corresponding liability until the settlement date when title passes.” In this *Guide*, the trade date is specified as the date when interest starts to accrue, recognizing that the trade date and settlement date generally coincide.

<sup>153</sup>In an exceptional case, a borrower may receive the loan proceeds in advance of incurring interest expense, because the loan contract calls for a no-interest grace period in the first stage of the life of the loan. For such a loan, the trade and settlement date is the date when the funds are disbursed and the grace period begins.

<sup>154</sup>A loan agreement may stipulate that an  $N$ -period loan has a principal amount,  $A (= A_1 + A_2 + \dots + A_{N-1})$ , that is to be disbursed in tranches (that is, installments). The borrower receives  $A_1$  at *time 1*, when the loan goes into effect, and  $A_2, \dots, A_{N-1}$  at periodic intervals (at *time 2, time 3, . . . , time N – 1*) during the life of the loan. The loan agreement legally or effectively represents a *master agreement for a series of loans* that should be recorded on separate trade dates—*time 1, time 2, time 3, . . . , time N – 1*.

contract. Instead, such a contract is accounted for as a derivative in the period between the trade date and the settlement date.<sup>155</sup>

**5.305** Settlement date accounting does not affect the reported data if the trade date and settlement date are within a single reporting period. When the trade date is in one reporting period and the settlement date is in the next reporting period, the data consequences from settlement date accounting for an *asset purchase* are:

- *First reporting period.* The amount of the asset purchase is excluded from transactions ( $T$ ), but any revaluation of the asset from the trade date to the end of the first reporting period is included in valuation changes ( $VC$ ). Compared with trade date accounting,  $T$  and the closing stock ( $CS$ ) for the first period—which also is the opening stock ( $OS$ ) for the second period—are understated by the amount of the asset purchase.
- *Second reporting period.* The amount of the asset purchase is included in  $T$ . Asset revaluation is included in  $VC$  in the same amount that would have been recorded if trade date accounting had been used.  $T$  is overstated by the amount of the asset purchase that, using trade date accounting, would have been included in  $T$  in the first reporting period.  $CS$  is the same amount that would have resulted from trade date accounting, given that the recording of the asset transaction in the second period offsets the understatement of the opening stock ( $OS$ ) for the second period.

**5.306** Using settlement date accounting, the data consequences for an *asset sale* are:

- *First reporting period.* The asset is included in the  $CS$ , valued at the price (and, if applicable, exchange rate) applicable to the sale of the asset. Compared with trade date accounting,  $CS$  for the first period and  $OS$  for the second period each are overstated by the amount of the asset purchase.
- *Second reporting period.* The amount of the asset sale is included in  $T$  (negative entry), and no  $VC$  entry is made.  $CS$  is zero—the same as under trade date accounting. Under either trade date or settle-

---

<sup>155</sup>The previous version of IAS 39.31 stated: “The fixed price commitment between trade date and settlement date meets the definition of a derivative—it is a forward contract. However, because of the short duration of the commitment, such a contract is not recognised as a derivative financial instrument under this Standard.” Similarly, such contracts do not meet the definition of financial derivatives in the methodology of the monetary and financial statistics. See the *MFSM*, ¶254–55.

ment date accounting, the asset has been derecognized (that is, removed from the accounts) before the end of the second reporting period.

**5.307** If the asset purchaser and seller were in the same economic subsector (for example, ODCs) and both used settlement date accounting, the data at the subsector level would be the same as if trade date accounting were used. The data consequences are symmetric in that each party's overstatement or understatement of transactions or stocks in a reporting period is exactly offset by corresponding understatements or overstatements for the other party. The aggregate data for the economic sector would be affected if the purchaser and seller did not use the same accounting—either trade date or settlement date accounting.

**5.308** If the asset purchaser and seller are in different economic subsectors, the data are affected in each subsector in which settlement date accounting is used. Even if both parties used settlement date accounting, no offsetting of data overstatements and understatements would occur across economic subsectors.

**5.309** This *Guide* recommends *adjustment on a trade date basis for transactions that have been recorded on a settlement date basis within one reporting period, but for which settlement does not take place until the next reporting period*. Data adjustment should not be an onerous task, because the adjustments (1) are needed only for transactions for which the trade and settlement dates are in different reporting periods, (2) are based on accounting records that are readily available from the settlement date accounting, and (3) do not require contra-entry adjustments in the profit or loss accounts. Restatement of asset transactions—from settlement date accounting to trade date accounting—is illustrated with numerical examples in Annex 5.2.

### Transaction Costs and Financial Service Fees

The creditor and the debtor should record *transactions* in financial assets and liabilities at the prices at which they bought and sold the assets. Transactions for which payment is to be made in the form of financial assets, goods, or services should be valued at the market prices of the items to be used in payment. Service charges, fees, commissions, taxes, and similar payments are income flows and, therefore, are excluded from the valuation of financial transactions, as well as from the valuation of stocks. (*MFSM*, ¶201)

### General principles

**5.310** In the methodology of the monetary and financial statistics, transaction costs—services charges, fees, commissions, taxes, etc.—are excluded from the transaction value for the financial asset being created or exchanged. This principle, though conceptually straightforward, often cannot be implemented in the purest form. National financial reporting standards sometimes stipulate that some or all types of transaction costs are to be included in the amounts of asset purchases or sales. Even if data on transaction costs are readily available (which is not always the case), the exclusion of transaction costs from the values of asset purchases and sales is not always feasible, particularly if the data adjustments would require (1) recalculation of the yields on financial assets and liabilities, (2) recalculation of accrued interest on the assets and liabilities, and (3) restatement of retained earnings (through restatement of expense or revenue items within net profit or loss).

**5.311** Transaction costs can be divided into costs that are added to the purchase price of an asset and costs that are subsumed within the price quotations for an asset. An example of the first type of transaction costs is a brokerage commission, expressed as a fixed amount per transaction or as a percentage of the value of an asset purchase or sale.

**5.312** Prime examples of the second type are transaction costs that are built into the bid-asked price spreads for financial assets. A market specialist stands ready to buy a financial asset at the quoted bid price and, at the same time, is prepared to sell the same financial asset at an asked price (that is, offer price) that is above the bid price. The spread between the bid and asked price—the profit margin of the market specialist—is a measure of transaction costs incurred by the buyer and seller combined. The transaction costs embodied in the bid-asked spread are sometimes referred to as *implicit trading costs*.

**5.313** Commissions and fees that buyers and sellers pay as transaction costs are revenue for financial services provided by brokers, dealer, securities exchanges, etc. From the revenue side, the remuneration received for the origination, exchange, or redemption of financial assets is classified as *financial service fees*.

**5.314** Transaction costs and financial service fees are described in this section, along with the account-

ing principles applied in the IFRSs and the recommendations for the accounting treatment in the monetary statistics. Specific guidance is provided on the treatment of the transaction costs embedded in the bid-asked spread of security price quotations.

### Transaction costs

**5.315** In IAS 39, the general principles for the treatment of transaction costs arising from the acquisition of a financial asset or incurrence of a liability are:<sup>156</sup>

Transactions costs include fees and commissions paid to agents (including employees acting as selling agents), advisors, brokers and dealers, levies by regulatory agencies and securities exchanges, and transfer taxes and duties. Transactions costs do not include debt premiums or discounts, financing costs or internal administrative or holding costs. (IAS 39.AG13)

When a financial asset or financial liability is recognised initially, an entity shall measure it at its fair value plus, in the case of a financial asset or financial liability not at fair value through profit or loss, transactions costs that are directly attributable to the acquisition or issue of the financial asset or financial liability. (IAS 39.43)

**5.316** Elaboration of the treatment of transaction costs is found in *Guidance on Implementing IAS 39—Financial Instruments: Recognition and Measurement*, Section E.1.1:

For financial assets [other than those at fair value through profit or loss], incremental costs that are directly attributable to the acquisition of the asset, for example fees and commissions, are added to the amount originally recognised. For financial liabilities [other than those at fair value through profit or loss], directly related costs of issuing debt are deducted from the amount of debt originally recognised. For financial instruments that are measured at fair value through profit or loss, transactions costs are not added to the fair value measurement at initial recognition.

For financial instruments that are carried at amortised cost, such as held-to-maturity investments, loans and receivables, and financial liabilities that are not at fair value through profit or loss, transaction costs are included in the calculation of amortised cost using the effective interest method and, in effect, amortised through profit or loss over the life of the instrument.

<sup>156</sup>IAS 39.66 in the earlier IAS 39 (issued March 1999) unequivocally stated: “Transaction costs are included in the initial measurement of all financial assets and liabilities.” The corresponding requirement in IAS 39.43, as quoted below, is narrower.

For available-for-sale financial assets, transactions costs are recognised in equity as part of a change in fair value at the next remeasurement. If an available-for-sale financial asset has fixed or determinable payments and does not have an indefinite life, the transactions costs are amortised to profit or loss using the effective interest method. If an available-for-sale financial asset does not have fixed or determinable payments and has an indefinite life, the transactions costs are amortised to profit or loss when the asset is derecognised or becomes impaired.

Transaction costs expected to be incurred on transfer or disposal of a financial instrument are not included in the measurement of the financial instrument.

**5.317** The methodology of the monetary and financial statistic differs from IAS 39 with respect to both the initial valuation (that is, measurement) of a market- or fair-valued financial asset and the accounting treatment for the transaction cost itself. In the monetary and financial statistics, a transaction cost is excluded from both the initial and subsequent valuation of the financial asset, and the transaction cost is classified as an *expense* (financial service cost) in the asset purchaser’s profit or loss accounts for the period in which the asset was acquired. In IAS 39, the transaction cost is included in the initial measurement of the financial asset, but it is treated as a loss in value for the asset in the reporting period immediately after the period in which the asset was acquired.

**5.318** The IAS treatment of the transaction costs subsequent to acquisition of an available-for-sale asset is illustrated in IAS 39.AG67:

The following example illustrates the accounting for transactions costs on the initial and subsequent measurement of an available-for-sale financial asset. An asset is acquired for CU100 plus a purchase commission of CU2. Initially, the asset is recognised at CU102. The next financial reporting date occurs one day later, when the quoted market price of the asset is CU100. If the asset were sold, a commission of CU3 would be paid. On that date, the asset is measured at CU100 (without regard to the possible commission on sale) and a loss of CU2 is recognised in equity. If the available-for-sale financial asset has fixed or determinable payments, the transaction costs are amortised to profit or loss using the effective interest method. If the available-for-sale financial asset does not have fixed or determinable payments, the transaction costs are recognised in profit or loss when the asset is derecognised or becomes impaired.

**5.319** This *Guide* recommends that—for the monetary and financial statistics—*transaction costs* (pur-



chase commissions, fees, service charges, regulatory levies, taxes, etc.) be recorded as expenses in net profit or loss for the period in which the financial asset is acquired. If the IFRSs approach has been followed, transaction cost data—disaggregated by asset category and economic sector of debtor/creditor—should be used, *if possible*, to adjust the data for the monetary and financial statistics. For the example in IAS 39.AG67, the data adjustments for the monetary statistics would include:

- *Reporting Period 1 (in which equity shares were acquired)*. The equity shares transaction (*T*) and the closing stock (*CS*) are restated at 100 (that is, the market value at the end of the period in the example in IAS 39.67). Retained earnings are reduced by 2 to reflect the reduction in net profit from restating the commission of 2 as an expense in Reporting Period 1.
- *Reporting Period 2*. The opening stock is restated at 100, and the previously recorded loss of 2—recorded as a valuation change (*VC*) in the IAS treatment—is removed. Retained earnings are increased by 2 to reflect the removal of the valuation change of 2 from the profit or loss accounts for Reporting Period 2.

### Financial service fees

**5.320** Accounting rules for recognition of revenue from financial service fees is covered in the appendix that accompanies (but is not part of ) IAS 18—*Revenue*. IAS 18.14 delineates three categories: (1) fees that are an integral part of the effective yield on a financial asset, (2) fees earned as the financial services are provided, and (3) fees earned on the execution of a “significant act.” Paragraph 14 of the appendix states (in part):

- (a) *Fees that are an integral part of effective interest rate of a financial instrument.*

Such fees are generally treated as an adjustment to the effective interest rate. However, when the financial instrument is measured at fair value with the change in fair value recognised in profit or loss, the fees are recognised as revenue when the instrument is initially recognised.

(i) *Origination fees received by the entity relating to the creation or acquisition of a financial asset other than one that under IAS 39 is classified as a financial asset ‘at fair value through profit or loss’.*

Such fees may include compensation for activities such as evaluating the borrower’s financial condi-

tion, evaluating and recording guarantees, collateral and other security arrangements, negotiating the terms of the instrument, preparing and processing documents and closing the transaction. These fees are an integral part of generating an involvement with the resulting financial instrument and, together with the related direct costs, are deferred and recognised as an adjustment to the effective interest rate.

(ii) *Commitment fees received by the entity to originate a loan when the loan commitment is outside the scope of IAS 39.*

If it is probable that the entity will enter into a specific lending arrangement and the loan commitment is not within the scope of IAS 39, the commitment fee received is regarded as compensation for an ongoing involvement with the acquisition of a financial instrument and, together with the related direct costs, is deferred and recognised as an adjustment to the effective interest rate. If the commitment expires without the entity making the loan, the fee is recognised as revenue on expiry. Loan commitments that are within the scope of IAS 39 are accounted for as derivatives and measured at fair value.

(iii) *Origination fees received on issuing financial liabilities measured at amortised cost.*

These fees are an integral part of generating an involvement with a financial liability. When a financial liability is not classified as ‘at fair value through profit or loss’, the origination fees received are included, with the related transactions costs incurred, in the initial carrying amount of the financial liability and recognised as an adjustment to the effective interest rate. An entity distinguishes fees and costs that are an integral part of the effective interest rate for the financial liability from origination fees and transactions costs relating to the right to provide services, such as investment management services.

- (b) *Fees earned as services are provided.*

(i) *Fees charged for servicing a loan.*

Fees charged by an entity for servicing a loan are recognised as revenue as the services are provided.

(ii) *Commitment fees to originate a loan when the loan commitment is outside the scope of IAS 39.*

If it is unlikely that a specific lending arrangement will be entered into and the loan commitment is outside the scope of IAS 39, the commitment fee is recognised as revenue on a time proportion basis over the commitment period. Loan commitments that are within the scope of IAS 39 are accounted for as derivatives and measured at fair value.

*(iii) Investment management fees*

Fees charged for managing investments are recognised as revenue as the services are provided.

...

*(c) Fees that are earned on the execution of a significant act.*

The fees are recognised as revenue when the significant act has been completed, as in the examples below.

*(i) Commission on the allotment of shares to a client.*

The commission is recognised as revenue when the shares have been allotted.

*(ii) Placement fees for arranging a loan between a borrower and an investor.*

The fee is recognised as revenue when the loan has been arranged.

*(iii) Loan syndication fees.*

A syndication fee received by an entity that arranges a loan and which retains no part of the loan package for itself (or retains a part at the same effective interest rate for comparable risk as other participants) is compensation for the service of syndication. Such a fee is recognised as revenue when the syndication has been completed.

**5.321** Data adjustments are not required if the data based on national financial reporting standards generally accord with the accounting principles set forth in the appendix that accompanies IAS 18.

***Bid and asked prices***

**5.322** The methodology of the monetary and financial statistics recommends that transactions be recorded at the actual prices at which financial assets are bought and sold, but excluding transaction costs. This recommendation implies that, at least conceptually, transaction data should be adjusted to take account of the transaction costs embedded in the bid and asked prices. In acquiring securities in the secondary market, an FC usually pays the *asked price* in the secondary market<sup>157</sup> and records the securities transaction in the full amount paid—that is, asked price per security *times* number of securities acquired. *For the methodology of the*

<sup>157</sup>An exception applies to securities acquired at less than the asked price because of discount prices that dealers sometimes provide for special customers or large-volume transactions.

*monetary and financial statistics, no data adjustment for transactions recorded at asked prices is necessary.*

**5.323** This *Guide* recommends that *subsequent revaluation of the securities should be based on the bid price—that is, the current price at which the securities could be resold to a dealer in the market.* Suppose that the prices—both bid and asked—of a security did not change from the time of purchase to the end of the reporting period. Despite unchanged bid and asked prices, a revaluation would be appropriate to reflect the value at which the securities could be sold (bid price) rather than the value at which the securities were acquired (asked price). Bid price quotations would continue to apply for the security revaluations in subsequent periods.

Stocks and flows denominated in foreign currency should be converted to national currency values at the market exchange rate prevailing at the moment they are entered in the accounts . . . The midpoint between the buying and selling rate of exchange should be used so that any service charge is excluded. (*MFSM*, ¶203)

**5.324** Purchases of foreign currency are also recorded in the amount paid—that is, the asked price. However, the revaluation of the foreign currency at the end of the reporting period should be based on the midpoint of the bid-asked spread for the exchange rate. The midpoint exchange rate is used as a numeraire for the translation of all foreign-currency-denominated assets (including foreign currency itself) and foreign-currency-denominated liabilities into national currency units. Such adjustment using the midpoints of bid-asked spreads applies only to foreign-currency-denominated assets and liabilities.

**Data Netting and Offsetting**

The general principle in this manual and the *1993 SNA* is that data should be collected and compiled on a gross basis. In particular, claims on a particular transactor or group of transactors should not be netted against the liabilities to that transactor or group. (*MFSM*, ¶245)

[Note: Limited circumstances in which netting of an asset and liability is permissible are described in this section of this *Guide*.]

### Debt defeasance

**5.325** In this Guide, *debt defeasance is considered to be an inappropriate accounting procedure*. Debt defeasance is described in the 1993 SNA (§11.24) as follows:

Debt defeasance allows a debtor (whose debts are in the form generally of securities other than shares and loans) to remove certain liabilities from the balance sheet by pairing irrevocably assets of equal value to the liabilities. Subsequent to the defeasance, neither the assets nor the liabilities are included in the balance sheet of the debtor, nor, frequently, need they be reported for statistical purposes. Defeasance may be carried out (a) by placing the paired assets and liabilities in a trust account within the institutional unit concerned, or (b) they may be transferred to another statistical unit. In the former case, the SNA will not record any transactions with respect to defeasance and the assets and liabilities will not be excluded from the balance sheet of the unit. In the latter case, the transactions by which the assets and liabilities are moved to a second statistical unit are recorded in the financial account of the units concerned and reported in the balance sheet of the unit that holds the assets and liabilities. Therefore, in the SNA, debt defeasance as such never results in liabilities being removed from the System, although it sometimes leads to a change in the institutional unit that reports those liabilities.

**5.326** This Guide recognizes that placing assets and liabilities in a trust or other type of special purpose vehicle is appropriate in some circumstance—for example, as part of the securitization of mortgage loans or other assets, in establishing a sinking fund for the future retirement of debt obligations, or in accounting for an employer’s pension fund for employees. However, the removal of liabilities and paired assets from the balance sheet through debt defeasance as such (or similar means) does not conform with the methodology in this Guide or the MFSM.

### Offsetting of a financial asset and liability

**5.327** The IAS specifies that, under some circumstances, financial assets and liabilities should be presented on a net basis in the balance sheet. IAS 32.42 states:

A financial asset and a financial liability shall be offset and the net amount presented in the balance sheet when, and only when, an entity:

- (a) currently has a legally enforceable right to set off the recognised amounts; and

- (b) intends either to settle on a net basis, or to realise the asset and settle the liability simultaneously.

**5.328** Offsetting pertains to the presentation of a financial asset and liability on the balance sheet, and, unlike debt defeasance, does not entail the removal of the financial asset and liability from the accounts. Offsetting of a financial asset and liability gives rise to neither transactions nor valuation changes. IAS 32.44 states:

Offsetting a recognised financial asset and a recognised financial liability and presenting the net amount differs from the derecognition of a financial asset or a financial liability. Although offsetting does not give rise to recognition of a gain or loss, the derecognition of a financial instrument not only results in the removal of the previously recognised item from the balance sheet but also may result in recognition of a gain or loss.

**5.329** This Guide recommends that, *for the monetary and financial statistics, offsetting should be deemed appropriate when conditions (a) and (b) in IAS 32.42 (or similar conditions in national financial reporting standards) are satisfied*.

**5.330** In the methodology of this Guide, *offsetting at the level of a master netting agreement is permissible, subject to satisfaction of the offsetting criteria in IAS 32.42 (or similar criteria)*. Regarding master netting arrangements, IAS 32.50 states:

An entity that undertakes a number of financial instrument transactions with a single counterparty may enter into a ‘master netting arrangement’ with that counterparty. Such an agreement provides for a single net settlement of all financial instruments covered by the agreement in the event of default on, or termination of, any one contract. . . . A master netting arrangement does not provide a basis for offsetting unless both of the criteria in paragraph 42 are satisfied.

### Hedge Accounting

**5.331** Rules for the application of hedge accounting are prevalent in national financial reporting standards and are extensively covered in IAS 39.<sup>158</sup>

<sup>158</sup>A distinction is drawn between *hedging strategies* and *hedge accounting*. Portfolio managers use hedging strategies to reduce the investment risks associated with financial assets and liabilities on the balance sheet, regardless of whether *hedge accounting* is applied to the recording of gains or losses for hedged items and hedging instruments. However, hedging strategies may be influenced by hedge accounting rules, if applicable.

**5.332** Hedge accounting is described in IAS 39.85, as follows:

Hedge accounting recognises the offsetting effects on profit or loss of changes in the fair values of the hedging instrument and the hedged item.

**5.333** IAS 39.86 describes the type of hedging relationships:

Hedging relationships are of three types:

- (a) *fair value hedge*: a hedge of the exposure to changes in fair value of a recognised asset or liability or an unrecognised firm commitment, or an identified portion of such an asset, liability or firm commitment, that is attributable to a particular risk and could affect profit or loss.
- (b) *cash flow hedge*: a hedge of the exposure to variability in cash flows that (i) is attributable to a particular risk associated with a recognised asset or liability (such as all or some future interest payments on variable rate debt) or a highly probable forecast transaction and (ii) could affect profit or loss.
- (c) *hedge of a net investment in a foreign operation* as defined in IAS 21.

**5.334** Basic definitions included in IAS 39.9 are:

A *hedging instrument* is a designated derivative or (for a hedge of the risk of changes in foreign currency exchange rates only) a designated non-derivative financial asset or non-derivative financial liability whose fair value or cash flows are expected to offset changes in the fair value or cash flows of a designated hedged item (paragraphs 72–77 and Appendix A paragraphs AG94–AG97 elaborate on the definition of a hedging instrument).

A *hedged item* is an asset, liability, firm commitment, highly probable forecast transaction or net investment in a foreign operation that (a) exposes the entity to risk of changes in fair value or future cash flows and (b) is designated as being hedged (paragraphs 78–84 and Appendix A paragraphs AG98–AG101 elaborate on the definition of hedged items).<sup>159]</sup>

*Hedging effectiveness* is the degree to which offsetting changes in the fair value or cash flows of the hedged item that are attributable to a hedged risk are offset by changes

in the fair value or cash flows of the hedging instrument (see Appendix A paragraphs AG105–AG113).

**5.335** Hedge accounting, as specified in IAS 39, pertains to accounting for gains or losses on financial assets and liabilities that are included in hedging relationships.<sup>160</sup> In particular, implementation of the hedge accounting rules does result in netting or reclassification of hedged items and hedging instruments in the balance-sheet presentation.

**5.336** *Hedge accounting does not give rise to the need for data adjustments for the monetary and financial statistics, if the hedge accounting is consistent with, or similar to, the hedge accounting rules in IAS 39.* The recording of the gain or loss on a financial asset or liability—in profit or loss accounts versus in shares and other equity—may be affected by hedge accounting. However, the methodology of this *Guide* does not require that gains and losses recorded in profit or loss be rerouted to shares and other equity, or vice versa, whether or not the original recording of the gain or loss was based on a hedging relationship.

**5.337** National financial reporting standards might specify hedge accounting rules that allow for the netting of hedged items and hedging instruments. If so, data adjustments would be needed for separate recording of the hedged item and hedging instrument in the appropriate financial asset or liability categories, except in an unlikely case in which the hedged item and hedging instrument satisfied the conditions for netting of a financial asset and liability.

## Annex 5.1. Estimation of Transactions and Valuation Changes

### Estimation in the Absence of OCVA

#### Equations

**5.338** *Foreign-currency-denominated transactions* constitute the total flow in foreign currency units at book value—that is, the difference between the *closing stock in foreign currency* ( $S_1$ ) and the *opening stock in foreign currency* ( $S_0$ ), or  $S_1 - S_0$ .

<sup>159</sup>“The hedged item can be (a) a single asset, liability, firm commitment, highly probable forecast transaction or net investment in a foreign operation, or (b) a group of assets, liabilities, firm commitments, highly probable forecast transactions or net investments in foreign operations with similar risk characteristics...” (IAS 39.78)

<sup>160</sup>The three types of hedging relationships permissible within the IFRSs—as defined in IAS 39.86—are (1) a fair value hedge, (2) a cash flow hedge, and (3) a hedge of a net investment in a foreign operation.

**5.339** Transactions in national currency units are estimated by applying the daily average exchange rate ( $e_m$ ) to the *foreign-currency-denominated flow* for the period:

$$(5.12) \quad T = e_m(S_1 - S_0).$$

**5.340** The valuation change in national currency units can be calculated from the exchange rates and opening and closing stocks in foreign currency units:

$$(5.13) \quad VC = e_1S_1 - e_0S_0 - e_m(S_1 - S_0) \\ = (e_1 - e_m)S_1 - (e_0 - e_m)S_0,$$

where  $e_1S_1$  and  $e_0S_0$  are the closing stock (*CS*) and opening stock (*OS*) in national currency units, respectively.

**5.341** Transactions and valuation change stated in terms of the closing and opening stocks in national currency units are:

$$(5.14) \quad T = e_m(S_1 - S_0) = (e_m/e_1) e_1S_1 - (e_m/e_0) e_0S_0 \\ = (e_m/e_1)CS - (e_m/e_0)OS,$$

and

$$(5.15) \quad VC = [1 - (e_m/e_1)]e_1S_1 - [1 - (e_m/e_0)]e_0S_0 \\ = [1 - (e_m/e_1)]CS - [1 - (e_m/e_0)]OS.$$

**5.342** Transactions and valuation change can be estimated from equations (5.12) and (5.14) and the stock data in foreign currency units, or from equations (5.13) and (5.15) and the stock data in national currency units. Alternatively, the valuation change can be derived—that is, can be obtained from  $V = CS - OS - T$ , where  $T$  is the transaction estimate from equation (5.12) or (5.14).

### Numerical example

**5.343** Suppose transactions and valuation changes are to be estimated for deposits denominated in a single currency, the euro (€). The exchange rate is expressed as national currency units,  $N$ , per euro. For example,  $N2/€$  is an exchange rate of two units of national currency per euro.

Opening stock in foreign currency,  $S_0$ : €112

Closing stock in foreign currency,  $S_1$ : €122

Beginning-of-period exchange rate,  $e_0$ :  $N2.1/€$

End-of-period exchange rate,  $e_1$ :  $N2.2/€$

Opening stock in national currency,  $OS$ :

$$N235.20 [= (N2.1/€)(€112)]$$

Closing stock in national currency,  $CS$ :

$$N268.40 [= (N2.1/€)(€122)]$$

Daily average exchange rate,  $e_m$ :  $N2.18/€$

$OCVA = 0$

### Transactions estimate

$$T = (2.18)(€122 - €112) = N21.80 \\ \text{(see equation (5.12))}$$

$$T = (2.18/2.2)(N268.40) - (2.18/2.1)(N235.20) \\ = N21.80 \text{ (see equation (5.14))}$$

### Valuation-change estimate

$$VC = (2.2 - 2.18)(€122) - (2.1 - 2.18)(€112) \\ = N11.40 \text{ (see equation (5.13))}$$

$$VC = [1 - (2.18/2.2)](N268.40) - [1 - (2.18/2.1)] \\ (N235.20) = N11.40 \text{ (see equation (5.15))}$$

$$VC = N268.40 - N235.20 - N21.80 \\ = N11.40 \text{ (derived)}$$

### Estimation in the Presence of OCVA

#### Equations

**5.344** *Foreign-currency-denominated transactions* are equal to the total flow in foreign currency units *less* OCVA in foreign currency units. Using the average exchange rate ( $e_m$ ), *foreign-currency-denominated transactions* are translated into national currency units:

$$(5.16) \quad T = e_m(S_1 - S_0 - OCVA).$$

**5.345** The valuation change is estimated as:

$$(5.17) \quad VC = e_1S_1 - e_0S_0 - e_1OCVA \\ - e_m(S_1 - S_0 - OCVA) \\ = (e_1 - e_m)S_1 - (e_0 - e_m)S_0 \\ - (e_1 - e_m)OCVA.$$

**5.346** Transactions and valuation change stated in terms of the closing and opening stocks in national currency units are:

$$(5.18) \quad T = (e_m/e_1)e_1S_1 - (e_m/e_0)e_0S_0 - e_mOCVA \\ = (e_m/e_1)CS - (e_m/e_0)OS - e_mOCVA.$$

$$(5.19) \quad VC = (1 - e_m/e_1)e_1S_1 - (1 - e_m/e_0)e_0S_0 \\ - (e_1 - e_m)OCVA \\ = [1 - (e_m/e_1)]CS - [1 - (e_m/e_0)]OS \\ - (e_1 - e_m)OCVA.$$

**5.347** Alternatively, the valuation change can be derived residually from the horizontal adding-up requirement—that is, from  $V = CS - OS - OCVA - T$ , where  $T$  is the transaction estimate from equation (5.16) or (5.18).

### Numerical example

**5.348** Suppose transactions and valuation changes are to be estimated for euro-denominated loans for which an OCVA—that is, a provision for loan losses—has been posted for the period.

Opening stock in foreign currency,  $S_0$ : €152

Closing stock in foreign currency,  $S_1$ : €137

Beginning-of-period exchange rate,  $e_0$ : N2.1/€

End-of-period exchange rate,  $e_1$ : N2.2/€

Daily average exchange rate,  $e_m$ : N2.18/€

Opening stock in national currency,  $OS$ :

$$N319.20 [= (N2.1/€)(€152)]$$

Closing stock in national currency,  $CS$ :

$$N301.40 [= (N2.1/€)(€137)]$$

$$OCVA = €13$$

### Transactions estimate

$$T = (2.18)(€137 - €152 - €13) = -N61.04$$

(see equation (5.16))

$$T = (2.18/2.2)(N301.40) - (2.18/2.1)(N319.20) - (2.18)(€13) = -N61.04$$

(see equation (5.18))

### Valuation-change estimate

$$VC = (2.2 - 2.18)(€137) - (2.1 - 2.18)(€152) - (2.20 - 2.18)(€13) = N14.64$$

(see equation (5.17))

$$VC = [1 - (2.18/2.2)](N301.40) - [1 - (2.18/2.1)](N319.20) - (2.20 - 2.18)(€13) = N14.64$$

(see equation (5.19))

$$VC = N301.4 - N319.2 - (-N61.04) - (2.2)(€13) = N14.64$$

## Annex 5.2. Settlement Date and Trade Date Accounting

**5.349** Separate examples for purchase and sale of a financial asset are presented in this annex. The *IAS*

*39—Implementation Guidance*, Section D.2.1, presents an example of entries for settlement date and trade date accounting for the purchase of a financial asset. In this annex, a modified and expanded version of the example in *IAS 39 IG D.2.1* is used to illustrate the settlement date and trade date accounting for either purchase or sale of securities other than shares. The principles apply to the purchase or sale of any financial asset recorded at market or fair value.

### Example I: Purchase of Securities Other Than Shares

**5.350** On December 29, 2003 (trade date), Financial Corporation A (FCA) acquires securities other than shares that are denominated in national currency (NC) at a price of NC1,000. The settlement date for the transaction is January 4, 2004. NC1,002 is the market value of the securities at the end of the first reporting period—that is, as of December 31, 2003. The market value of the securities on the settlement date is NC1,003, and the market value at the end of the second reporting period—that is, as of January 31, 2004—is NC1,005. In the *IAS 39 IG* example, the securities are marked to market (that is, are revalued) at NC1,003 on the settlement date. In the following examples, securities are revalued within the period, whereas the methodology in this *Guide* requires only end-of-period revaluation. The end-of-period value of NC1,005 has been added to the *IAS 39 IG* example.

**5.351** Using *settlement date accounting* for the securities purchase, the accounting records are:

First period (December)	OS	T	VC	OCVA	CS
Securities other than shares	0		2		2
<i>Other entries</i>					
Retained earnings (change through profit or loss)				2	
Second period (January)	OS	T	VC	OCVA	CS
Securities other than shares	2	1,000	3		1,005
<i>Other entries</i>					
Retained earnings (change through profit or loss)				3	
Deposits (payment for securities on January 4, 2003)		-1,000			

**5.352** Using *trade date accounting* for the securities purchase, the accounting records are:

First period (December)	OS	T	VC	OCVA	CS
Securities other than shares	0	1,000	2		1,002
<i>Other entries</i>					
Retained earnings (change through profit or loss)			2		
Other accounts payable: securities settlement account		1,000			1,000

Second period (January)	OS	T	VC	OCVA	CS
Securities other than shares	1,002		3		1,005
<i>Other entries</i>					
Retained earnings (change through profit or loss)			3		
Deposits (payment for securities on January 4, 2003)		-1,000			
Other accounts payable: securities settlement account		-1,000			

### Example 2: Sale of Securities Other Than Shares

**5.353** The securities transaction in the first example is used for Example 2, but from the other side of the transaction. In Example 2, Financial Corporation B (FCB) sells the securities on December 29, 2003, and uses settlement date accounting to record the sale. The opening balance for the securities, as of December 1, 2003, is NC996.

**5.354** Using *settlement date accounting* for the securities sale, the accounting records are:

First period (December)	OS	T	VC	OCVA	CS
Securities other than shares	996		4		1,000
<i>Other entries</i>					
Retained earnings (change through profit or loss)			4		

Second period (January)	OS	T	VC	OCVA	CS
Securities other than shares	1,000	-1,000			Account Closed
<i>Other entries</i>					
Deposits: received for securities (January 4, 2003)		1,000			

**5.355** Using *trade date accounting* for the securities sale, the accounting records are:

First period (December)	OS	T	VC	OCVA	CS
Securities other than shares	996	-1,000	4		Account Closed
<i>Other entries</i>					
Retained earnings (change through profit or loss)			4		
Other accounts receivable: securities settlement account		1,000			1,000

Second period (January)	OS	T	VC	OCVA	CS
Securities other than shares	Account Closed				
<i>Other entries</i>					
Deposits: received for securities (January 4, 2004)			1,000		
Other accounts receivable: securities settlement account	1,000	-1,000			

### Example 3: Purchase or Sale of Securities Other Than Shares: Settlement and Trade Dates in the Same Reporting Period

**5.356** The data for the reporting period do not need to be adjusted if the settlement and trade dates occur in the same reporting period.

**5.357** Suppose that, on December 15, 2003 (trade date), FCA acquires securities other than shares at a price of NC1,000. The settlement date for the transaction is December 19, 2003. FCB, seller of the securities, shows a market value of NC996 for the securities at the beginning of the period (December 1, 2003). The market values on the settlement date (December 19, 2003) and at the end of the period (December 31, 2003) are NC1,002 and NC1,005, respectively.

**5.358** Using *settlement date or trade date accounting* for the securities purchase by FCA, the relevant data for the reporting period are:

FCA: Reporting period (December)	OS	T	VC	OCVA	CS
Securities other than shares	0	1,000	5		1,005
<i>Other entries</i>					
Deposits: payment for securities on December 19		-1,000			
Retained earnings (change through profit or loss)			5		

**5.359** Using settlement-date or trade-date accounting for the securities sale by FCB, the relevant data for the reporting period are:

<b>FCB: Reporting period (December)</b>	<b>OS</b>	<b>T</b>	<b>VC</b>	<b>OCVA</b>	<b>CS</b>
Securities other than shares	996	-1,000	4		<b>Account Closed</b>
<i>Other entries</i>					
Deposits: payment for securities (December 19)		1,000			
Retained earnings (change through profit or loss)			4		



## 6. Money, Credit, and Debt

### Introduction

**6.1** This chapter covers a variety of issues pertaining to currency, deposits included in or excluded from the national definition of broad money, the monetary base, and credit and debt aggregates.

### National Currency

#### General Principles

*Currency consists of notes and coins that are of fixed nominal values and are issued by central banks or governments. Currency is divided into separate categories for national currency and foreign currency representing liabilities of central banks or governments in other countries. (MFSM, ¶124)*

Central bank or central government holdings of unissued or demonetized currency are **recorded as nonfinancial assets** in sectoral balance sheets. **Demonetized currency should be removed from the balance sheet upon disposal.** (MFSM, ¶126)

[The boldface text does not appear in the MFSM and has been added for clarification or correction.]

**6.2** This *Guide* uses several concepts in describing the creation and use of national currency:

- *Issuance of currency.* The incurrence of a debt obligation for currency that is placed in circulation in the economy. The *currency issuer* is the institutional unit that records the currency as a liability in its balance sheet.
- *Placement of currency in circulation.* Distribution of newly issued currency to holders outside the central bank, including financial corporations (FCs), other sectors, and nonresidents.
- *Currency in circulation.* The amount of currency issued by the central bank and held by resident sectors and nonresidents. Currency in circula-

tion consists of all currency issued by the central bank less currency held as vault cash in the central bank.<sup>1</sup>

- *Currency replacement.* Substitution of new national currency notes for old national currency notes, or new coins for old coins. Currency replacement involves the substitution of “new paper” for “old paper” or, in the case of coins, “new metal” for “old metal,” if the new currency notes or coins have the same nominal value (even if not the same denominations) as the old notes or coins.<sup>2</sup> In a different context, *currency replacement* can refer to “dollarization” of an economy, when national currency is replaced by foreign currency as the principal medium of exchange and national unit of account.<sup>3</sup>
- *Currency outside depository corporations (DCs).* Currency in circulation less currency holdings (vault cash) of other depository corporations (ODCs).<sup>4</sup>
- *Currency component of monetary aggregates.* The sum of *Currency outside DCs* and, if applicable, currency issued by central government and/or non-financial corporations.<sup>5</sup>

<sup>1</sup>*Currency in circulation* is the currency account in the liability section of the *Central Bank Survey (CBS)* (see Table 7.8 in Chapter 7, Annex 7.3).

<sup>2</sup>The only accounting entries are those related to a reduction in nonfinancial assets—the category in which the new notes or coins were recorded prior to the new currency being distributed and the old currency being destroyed.

<sup>3</sup>See ¶6.14 in this chapter.

<sup>4</sup>*Currency outside DCs* is the currency liability shown in the *Depository Corporations Survey (DCS)*. Holders include the central government and nonresidents, as well as those distinguished as *money holders* (MFSM, ¶316). The central bank’s liability for currency in circulation is equal to the total amount of currency issued by the central bank less the central bank’s own holding of national currency.

<sup>5</sup>An exception applies to “dollarized” economies (see ¶6.14–6.17 in this chapter). In these countries, *Issuance of currency*, *Currency outside DCs*, and *Currency component of monetary aggregates* pertain to foreign currency, which is issued by a nonresident government.

### Central Bank and Other Depository Corporations

**6.3** In the majority of countries, *issuance of currency* is an exclusive right of the central bank, and *placement of currency in circulation* is mainly or entirely channeled from the central bank through the ODCs and to the money-holding sectors of the economy.<sup>6</sup>

**6.4** The amount of currency placed into circulation is determined by ODCs' demand for vault cash and their customers' demand for currency notes and coins.<sup>7</sup> Currency is placed into circulation when it is transported from the central bank to an ODC, accompanied by the appropriate accounting entries.<sup>8</sup> The currency becomes *currency outside DCs* when ODCs' customers in the money-holding sectors exchange deposits for currency.<sup>9</sup>

### Central Government

**6.5** A central government may issue coins and/or national currency notes that account for all or only part of the total currency in an economy. The central government most commonly issues the coins, and the central bank issues the currency notes.

**6.6** Though the central government incurs a liability for *issuance of currency*, the central bank often has sole responsibility for the *placement of currency in circulation*. A central government purchases the currency

from a domestic or foreign mint (or bureau of engraving) and delivers the currency to the central bank. In the central bank's accounts, the nominal (face) value of the currency is recorded as vault cash (*Currency—National*), along with a corresponding increase in the central bank's liability (*Transferable deposits—In national currency*) to the central government.<sup>10</sup>

**6.7** Issuance of this currency, though not a liability in the *CBS* or *DCS*, enters the monetary statistics as a separate component of broad money (see *MFSM*, Box 6.1, p. 58). Obtaining data on the issuance and subsequent circulation of the currency is the main concern of monetary statistics compilers. In many cases, the data are directly available in the central bank's records of the transactions described in the preceding paragraph. This *Guide* recommends that *the central bank data should be used, if the data are known to be comprehensive*.

**6.8** In principle, the central government can place some of the currency into circulation through direct transactions with institutional units in the money-holding sectors.<sup>11</sup> This *Guide* recommends that, *in the presence of such direct distribution of currency, the central government should be requested to provide data on its total currency issuance on a monthly basis. The central government should be advised that any currency in its treasury stock (in inventory but not yet distributed) should be excluded from the data provided to monetary statistics compilers*.<sup>12</sup> To verify the consistency of the records of the central bank and central government, it may be useful to request monthly reporting of central government's issuance of currency, even if all issuance supposedly is reflected in the central bank's records.

<sup>6</sup>Historically, currency sometimes was issued by ODCs—for example, during the “wildcat banking” era in the United States in the 1840s. Today, *issuance of currency* by ODCs is confined to two jurisdictions within the United Kingdom—Scotland and Northern Ireland—and to Hong Kong Special Administrative Region. *Issuance of currency* by ODCs in these jurisdictions is matched by ODC deposits of convertible foreign currency (equivalent in value to the currency issued) in the Bank of England and the Hong Kong Monetary Authority, respectively. This mechanism is tantamount to issuance of currency by the central bank.

<sup>7</sup>Through direct transactions with institutional units in the money-holding sectors, a central bank sometimes accounts for a relatively small direct placement of *currency outside DCs*.

<sup>8</sup>The ODC records an increase in *Currency—national* and a decrease in its transferable deposit holdings at the central bank. The central bank records the reduction in the ODC's transferable deposits and either a reduction in the central bank's holding of currency that was previously issued or, for a new issuance of currency, a reduction in nonfinancial assets (unissued currency valued at cost) and revenue equal to the nominal value of the currency *less* the cost of the currency.

<sup>9</sup>The currency/deposit composition of broad money is determined by the money-holding sectors. Upon demand from its customers, an ODC stands ready to reduce its vault cash in exchange for a reduction in customers' transferable (or savings) deposit holdings at the ODC.

<sup>10</sup>Through this transaction, the central government obtains the *seigniorage* from issuance of the currency—the net revenue equal to the difference between the nominal value of the currency and the cost of acquisition and distribution of the currency.

<sup>11</sup>For example, the central government could distribute the currency notes in making cash payments to suppliers of government goods and services. The central government might distribute coins to the household sector, for example, in the course of conducting cash transactions with individuals acquiring licenses or paying other government fees.

<sup>12</sup>For most countries, the currency component of broad money includes the central government's holding of currency. The central government's holdings of currency that has already been placed in circulation—whether issued by the central government or the central bank—can be included or excluded from broad money, as a matter of national choice. However, unissued currency should invariably be excluded for all data on currency in circulation.

## Commemorative Coins

Some countries issue gold coins, which are held for intrinsic value, or commemorative coins, which are held for numismatic value. If not in active circulation, such coins should be classified by the holder as nonfinancial assets rather than as financial assets, **and within Other accounts payable by the seller/issuer.** (*MFSM*, ¶125)

[The boldface text does not appear in the *MFSM* and has been added for clarification.]

**6.9** Commemorative coins often are minted from precious metal, are packaged in fancy covers and cases, and are sold at prices well above the nominal (face) value. However, commemorative coins sometimes are produced in less expensive form and are sold at or near the face value. These coins qualify as legal tender and sometime are used as a medium of exchange by those for whom purchase of a good or service outweighs the value of possessing the coin (particularly when a coin commands a premium over nominal value).

**6.10** *This Guide offers alternative approaches to accounting for the sale/issuance of commemorative coins.* The central bank can view the sale of the coins as simply a commodity transaction.<sup>13</sup> It may be impractical to include the value of any portion of the commemorative coins in broad money, even if a few of the coins are expected eventually to appear (at least temporarily) as a medium of exchange. Alternatively, when sold by the central bank, the coins can be recorded at nominal (face) value in the miscellaneous category of Other accounts payable—other.<sup>14</sup>

**6.11** The amount of currency being used as a medium of exchange is overstated by the nominal

<sup>13</sup>Having acquired the coins from the mint, the central bank records them at cost in nonfinancial assets. Suppose the coins are acquired at a cost of **10**, and are sold for **100** in exchange for currency notes. The central bank would record an asset of **100** (currency received), nonfinancial assets of **-10** (commemorative coins from inventory at cost), and revenue of **90** (profit on sale of coins). The coins thereby disappear from the balance sheet of the central bank.

<sup>14</sup>Using the example in the preceding footnote, suppose that the coins have a face value of **50**. When the coins are sold, the central bank records an asset of **100** (currency received), nonfinancial assets of **-10** (coins from inventory at cost), a liability of **50** within *Other accounts payable—other* (commemorative coins at face value), and revenue of **40** (profit on sale of coins). The central bank's liability for the nominal value of the commemorative coins thereby remains on the balance sheet.

value of any non-commemorative coins and currency notes that have been withdrawn by collectors, who value specific notes or coins for their age or rarity. The overstatement is usually considered insignificant and is ignored in the national definition of broad money.

## Foreign Currency

### General Principles

**6.12** Foreign currencies serve two functions in all countries:

- *Store of value.* Foreign currency notes and coins, which are easily transported into and out of a country, are held by all sectors of an economy. Holdings of currency notes and coins issued by foreign countries constitute a separate category of claims on nonresidents in the sectoral balance sheets of the FCs, as well as in the balance sheets of institutional units in the nonfinancial sectors.
- *Foreign unit of account.* Institutional units in the various economic sectors hold foreign-currency-denominated assets—deposits, loans, securities other than shares, and financial derivatives. DCs in many countries accept foreign-currency-denominated deposits and make foreign-currency-denominated loans. Corporations and governmental units sometimes issue foreign-currency-denominated securities other than shares and may have foreign-currency-denominated positions in financial derivatives and other accounts receivable/payable.

**6.13** Foreign-currency-denominated assets and liabilities may be claims on and liabilities to residents or nonresidents. Foreign-currency-denominated deposits that DCs accept from money-holding sectors usually are included in national definitions of broad money. All foreign-currency-denominated claims on and liabilities to nonresidents should be classified as foreign assets and foreign liabilities, respectively, regardless of the functions that foreign currencies serve in the economy.

**6.14** Foreign currency serves additional functions in several countries. In some countries, a foreign currency is the only or principal medium of exchange,<sup>15</sup>

<sup>15</sup>The national currency in circulation in these countries is limited to coins issued by the central bank or government and, in some countries, old national currency notes not yet removed from circulation.

and the foreign currency unit is used as the national unit of account. These countries are referred to as *dollarized economies*, regardless of whether the U.S. dollar or some other foreign currency (such as the euro) is the foreign currency that serves as the medium of exchange and the national unit of account.<sup>16</sup> Dollarization has implications for the measurement of monetary aggregates in an economy and for the classification of financial assets and liabilities in the sectoral balance sheets of FCs.<sup>17</sup>

**6.15** Some countries use their own national unit of account, but permit both national and foreign currency to serve as media of exchange. These countries are described as having *currency co-circulation*. Currency co-circulation has implications for the measurement of the monetary aggregates in an economy, but does not affect the classification of financial assets and liabilities in the sectoral balance sheets of FCs.

### Dollarization

**6.16** During the transition to a dollarized economy, the following actions are taken:

- The financial records of institutional units in all sectors of the economy are converted from the national unit of account to U.S. dollars (or other foreign unit of account) at an exchange rate announced by the central bank or government.
- National currency notes are withdrawn from circulation, either gradually or within a preannounced period in which currency holders are entitled to exchange the national currency for U.S. dollars (or another foreign currency) at the preannounced exchange rate.

**6.17** Dollarization of an economy is reflected in the following accounts in the sectoral balance sheets and surveys of the FCs:

- *Currency in circulation*. After dollarization is completed, this liability account of the central

bank shows only the amount of national-currency-denominated coins and old national currency notes, if any, that are still in circulation.

- *U.S. dollar (or other dollarization currency) notes and coins*. Holdings of the “dollarization currency” are included in the same category as holdings of other foreign currencies; all holdings of the dollarization currency and other foreign currency are classified as claims on nonresidents (foreign assets).
- *Financial asset/liability disaggregation by currency of denomination*. In the sectoral balance sheet in Table 7.1 of the *MFSM*, deposits are disaggregated into separate categories for *In national currency* and *In foreign currency*. For a dollarized economy, the subcategory of *In national currency* should be reinterpreted as *In the national unit of account*.<sup>18</sup> The distinction between *In national currency* and *In the national unit of account* for a dollarized economy is important for adherence to the definition of official international reserves, which excludes all *national-currency* assets.

**6.18** For a dollarized economy, the financial assets denominated in U.S. dollars (or another dollarization currency) are *In the national unit of account* but not *In national currency*, because the term *national currency* does not apply to a currency issued by a non-resident unit. The U.S. dollar is the *national currency* of only the United States (wherein all U.S. dollar notes and coins are issued within the Federal Reserve System). However, in the sectoral balance sheets in a dollarized economy, all deposits denominated in U.S. dollars (or another dollarization currency) should be classified as *In national currency*, which is reinterpreted as *In national unit of account*, and all deposits denominated in other foreign currencies are classified as *In foreign currency*.

**6.19** The same classification principle applies to other categories of financial assets and liabilities. All loans, securities other than shares, and financial derivatives denominated in U.S. dollars (or an alternative “dollarization” currency) are classified as *In national currency*, which is reinterpreted as *In national unit of account*; those denominated in other foreign currencies are classified as *In foreign currency*.

<sup>16</sup>The dollarization in Panama has a minor exception. The national currency unit is the balboa, which is on a par with the U.S. dollar. The foreign currency unit (that is, U.S. dollar) is tantamount to being the national currency unit of Panama. Coins denominated in balboas (but not balboa notes) are in circulation.

<sup>17</sup>This *Guide* uses a narrower definition of dollarization than literature in which dollarized refers to any country in which foreign-currency-denominated assets and liabilities are prevalent, even when national currency is the medium of exchange and unit of account. By that definition, most countries would be classified as dollarized.

<sup>18</sup>On reserve assets as *foreign claims*, see International Monetary Fund (1993), ¶424–430; and Kester (2001), ¶66–67.

## Co-circulation

**6.20** In some countries, foreign currency is allowed to co-circulate with national currency. The foreign currency serves as a medium of exchange and store of value, and the national currency continues to serve as a medium of exchange, store of value, and the national unit of account. The circulation of foreign currency (often the currency of a major trading partner) together with circulation of national currency is common in regional monetary integrations in which member countries retain their national currencies. The currencies are allowed to co-circulate freely within a single economy wherein each currency serves as the medium of exchange, and the national currency remains the national unit of account. Co-circulation may be legally sanctioned, or may be permitted as an informal practice that is clearly acceptable to the national authorities.<sup>19</sup> Co-circulation may involve the use of two or more foreign currencies, along with the national currency, as media of exchange.

**6.21** Co-circulation of foreign currency does not affect the classification of the accounts in the sectoral balance sheets of the FCs or in the balance sheets of the other institutional units in the economy. The characteristics of currency in these countries are:

- *Unit of account.* The financial records in all sectors of the economy continue to be based on the national currency as the standard unit of account.
- *Currency in circulation.* The central bank's account for currency in circulation shows its liability for the outstanding amount of national currency that it has issued. Liabilities for the co-circulating foreign currency appear only in the records of the foreign central bank or central government that issued the currency.
- *Co-circulating notes and coins.* Holdings of the co-circulating foreign currency continue to be included in the same category as holdings of other foreign currencies, wherein all foreign currency is classified as claims on nonresidents (foreign assets).
- *Financial asset/liability disaggregation by currency of denomination.* All financial assets and liabilities denominated in a foreign currency

<sup>19</sup>Co-circulation is distinguished from black-market trading, which involves the surreptitious buying and selling of foreign currency in violation of national laws or regulations that are enforced.

(whether or not a co-circulating foreign currency) are classified as *In foreign currency*.

**6.22** Currency co-circulation may be combined with dollarization, as in the case of the monetary integration arrangement of the Common Market Area (CMA) in southern Africa. The rand is the national currency of South Africa, as well as a co-circulating currency in the other CMA countries—Lesotho, Namibia, and Swaziland. Each of these countries has a national currency that, along with rand note and coins, serves as a medium of exchange and the national unit of account. However, the national currencies (Lesotho loti, Namibia dollar, and Swaziland lilageni) have exchange rates that are pegged to the South African rand, which make the rand akin to a national unit of account. Under the monetary arrangements, all CMA members share the seigniorage that South Africa obtains from the issuance of rand notes and coins.

## Currency-Union Currency

**6.23** In a currency union, the unionwide currency is issued by a supranational central bank such as the European Central Bank (ECB), East Caribbean Central Bank (ECCB), and the central banks of the CFA franc<sup>20</sup> areas—Banque Centrale des Etats de l'Afrique de l'Ouest (BCEAO) and Banque de Etats de l'Afrique Centrale (BEAC). The unionwide currency serves as the medium of exchange and national unit of account in each of the member countries of the union. Several actions apply to each country in the currency union:

- For the transition to the union currency, a fixed exchange rate between the national currency and the union currency is announced.
- National currency notes and coins are withdrawn from circulation, either gradually or within a pre-announced period.
- The financial records of institutional units in all sectors of the economy are translated into union currency units, which is the new standard unit of account.

<sup>20</sup>Franc de la Communauté financière d'Afrique (franc of the African Financial Community) for the West African Economic and Monetary Union member countries, and franc de la Coopération financière en Afrique centrale (franc of Financial Cooperation in Central Africa) for countries belonging to the BEAC area.

- Notes and coins denominated in the union currency are placed in circulation by the central banks of the union's member countries.

**6.24** The introduction of the union currency in an economy is reflected in the sectoral balance sheets and surveys of the FCs of each union member country:

- *Currency in circulation.* This liability account of the central bank shows the amount of union-currency notes and coins issued by (or treated as if issued by) the central bank, as well as the amount of national currency issued earlier by the national central bank and not yet removed from circulation.
- *Union currency notes and coins.* Union currency notes and coins are classified as *In national currency*.
- *Financial asset/liability disaggregation by currency.* In the sectoral balance sheet in Table 7.1 of the *MFSM*, deposits are disaggregated into separate categories for *In national currency* and *In foreign currency*. For economies participating in a currency union, *In national currency* must be interpreted as *In the currency-union unit of account*. All union-currency-denominated assets and liabilities are classified as *In national currency*.

### Estimation of Currency-Union Currency

Difficulties arise in estimating the currency in circulation in the individual member countries of a currency union. Currency issued by the regional central bank headquarters and/or the national central banks within a currency union circulates as legal tender throughout the union, making it difficult to estimate the amount of the currency that is in use in each member country. (*MFSM* ¶292)

**6.25** The *MFSM* highlights the difficulties of estimating the amount of union currency in circulation in individual countries belonging to a currency union. However, similar problems arise for the estimation of the amount of foreign currency that circulates in a dollarized economy, or co-circulates along with a national currency. In each case, the basic problem is the lack of data on cross-border currency flows that do not appear in FCs' accounts and generally are not reported from other sources to the monetary statistics compilers.

**6.26** Estimation and compilation practices for currency in circulation differ across currency unions. For the European Monetary Union, each national central

bank records euro banknote liabilities in an amount equal to its share of the total euro banknotes issued for the entire currency union. Each country's share is calculated in proportion to the amount of its equity share in the ECB *plus* coins issued by the national central bank *less* the amount of euro currency notes and coins held by the monetary and financial institutions (ODCs) in the country.<sup>21</sup>

**6.27** The ECCB has the exclusive right to issue the currency notes and coins of the Eastern Caribbean Currency Union (ECCU). The ECCU member countries do not have national central banks, and the currency is placed in circulation through the ODCs in these countries. The amount of currency issued in each member country is based on each country's equity share in the ECCU. All currency notes and coins are marked with a specific letter to designate the country of issue. Notes and coins spent in another member country are eventually repatriated to the member country of issue.

**6.28** For the CFA countries, which are members of BCEAO and BEAC, currency issuance for a member country is in proportion to that country's equity share in the unionwide central bank. The currency notes and coins issued for a member country are imprinted with the country name and a national symbol, which facilitates the repatriation of notes and coins that circulate outside the country of issue.

### Estimation of Dollarization and Co-circulation Currency

**6.29** Various techniques can be used to estimate the amount of foreign currency in circulation in dollarized economies and countries in which currency co-circulation is extensive. Estimation methods can be based on surveys of currency holding, historical information about currency holdings, and econometric techniques. Similar techniques apply to the estimation of national currency outflows from countries that provide the dollarization or co-circulation currency to other countries.<sup>22</sup>

<sup>21</sup>The ECB retains 8 percent of the total euro banknotes issued, and the remaining 92 percent is allocated to member countries based on the predetermined shares.

<sup>22</sup>Though several countries have shown considerable interest in adjusting their monetary aggregates for circulation of foreign currency, implementation of such adjustment has not followed. Adjustments for cross-border currency flows have been undertaken for the balance of payments statistics for some countries.

**6.30** Collection of survey data on currency flows across the national border is a first step in estimating the currency in circulation in a country with co-circulation of currency or a dollarized economy. Surveys typically cover currency transactions within the banking system, or are customs-type reports of currency carried by travelers. In some countries, statistical estimates of international flows of currency are constructed through netting of outflows and inflows associated with balance of payments transactions. Gross outflows associated with tourism, cross-border remittances, and other activities are netted against gross inflows from tourism, bank flows, etc. Some countries have formal customs reports that require reporting of currency taken across borders. In some countries, data for small transactions need not be reported, or are only sampled.

**6.31** Data on currency shipments are important for estimating the cross-border currency flows. Wholesale shipments of U.S. currency are provided by a few large FCs that specialize in this service. Local financial institutions acquire or repatriate U.S. dollars through wholesale shippers. For large shipments of U.S. currency, the U.S. Customs Department requires that a currency and monetary instrument report (CMIR) be filed by the shipper. The reporting applies only to cross-border currency shipments of \$10,000 or more.

**6.32** Survey methods can be used to estimate foreign currency holdings of the general population of a country. In addition to amounts of U.S. dollars, euros, and other foreign currencies held, the survey questions can delve into motives for foreign currency holding, identification of currency exchanges frequented by respondents, and their propensities for overseas travel. A general aversion to disclosure of personal or confidential information about currency transactions and holdings undermines the reliability of data from direct surveys of households or businesses.<sup>23</sup>

**6.33** A technique for eliciting relatively accurate responses is to survey households only about their foreign currency holdings *relative to* their national currency holdings. Using survey responses on the

ratio of foreign currency holdings to national currency holdings and an estimate of households' total national currency holdings, foreign currency holdings of households can be estimated.

**6.34** Some insight into currency circulation may be gained by analyzing data on national currency holdings<sup>24</sup> before the introduction of dollarization or before widespread use of co-circulation. However, care must be exercised in extrapolating from historical experience. Data on currency holdings in the period just prior to dollarization may reflect a flight to currency in response to financial and economic instability in the country (which may have provided impetus for the move to dollarization). For a country experiencing an evolution from cash-based to deposit-based transactions in the retail market, the propensity for currency holding in periods before dollarization or significant co-circulation may contain scant information that is relevant to the present period.

**6.35** Estimation of the foreign currency circulation in the co-circulation context can be based on econometric modeling of the demand for money. In these models, the quantity of money—observed deposits and national currency *plus* the unobserved co-circulation currency—is specified as dependent on a set of macroeconomic variables (a measure of national income, interest rates, expected inflation, etc.). Applying econometric methods, an estimate of the unobserved quantity of the co-circulation currency can be obtained.<sup>25</sup>

## Deposits

### Issued by Public Nonfinancial Corporations

**6.36** Public nonfinancial corporations (typically, post office and telecommunication units) in some countries accept deposits from individuals (and possibly small businesses).<sup>26</sup> In this *Guide*, these deposit facilities are characterized by function and are designated as *savings systems* in recognition that savings deposits are the major type of deposits accepted.

<sup>23</sup>A significant share of the currency circulation is usually associated with “underground activities,” ranging from smuggling to the use of cash transactions to avoid the recording of taxable income. Exclusion of participants in these activities distorts the coverage of the survey; inclusion leads to useless results.

<sup>24</sup>Total amount or as a proportion of a broad or narrow monetary aggregate.

<sup>25</sup>These and other methods of estimating the amount of co-circulating currency are described in Krueger and Ha (1995).

<sup>26</sup>The deposit taking is provided for the convenience of small savers, particularly those in rural areas that are not served by ODC branches.

**6.37** Data collection depends on the institutional characteristics and financial activities of a savings system:

- *Separate institutional unit.* A savings system may have a separate set of accounts within the public nonfinancial corporation.<sup>27</sup> This *Guide* recommends that *the savings system should be classified as an ODC and be required to report balance-sheet data in accordance with the standard procedures for monthly reporting by ODCs.*
- *Savings deposit pass-through to a DC.* In some countries, deposit taking constitutes the only financial service provided by the savings system. The savings system maintains a deposit account at a DC (central bank or ODC) into which all funds from the savings deposits are redeposited. The saving system's deposits at the DC are included in broad money, given that the public nonfinancial corporation operating the savings system is within a money-holding sector.<sup>28</sup> Inclusion of the savings systems' direct liability to its depositors would result in double-counting, given that the savings system cannot use the DC balances for its own expenditures.
- *Savings-deposit funding for central government.* Funds obtained from deposits in the savings system may be channeled directly to the central government for its use as budgetary or extrabudgetary funds. Data for the deposits need to be collected directly from the nonfinancial corporation that operates the savings system, if the savings deposits are to be included in broad money. A line for these deposits is included in the presentation of the components of broad money (see Box 6.3).

### Issued by Central Government

**6.38** The treasury or some other division of the central government may accept deposits or issue securities that are included in the national definition of broad money. The proceeds from issuance of the deposits or securities may be used for various types of central government expenses, or may be used for government lending directly to other sectors of the economy.<sup>29</sup> Data on the securities outstanding and/

<sup>27</sup>In such cases, the savings systems often engage in financial intermediation by taking deposits from small savers and lending to farmers and other small-loan customers.

<sup>28</sup>Presupposing that public nonfinancial corporations' deposits are included in the definition of broad money.

<sup>29</sup>This lending will be reflected in *Net lending/borrowing* in the statement of government operations.

or the deposits need to be obtained directly from the treasury or other relevant division of the central government. For the compilation of broad money, the relevant data include only those securities and/or deposits held by money-holding sectors.

### Issued by Financial Corporations in Liquidation or Reorganization

The ODCs subsector may include corporations operating under the control of receivers or regulators or that are no longer dealing with the public. (*MFSM*, ¶95)

This manual recommends exclusion of all deposit liabilities of nonoperating depository corporations from the monetary aggregates, **if the expectation is that depositors will not have access to the funds within the foreseeable future. These should be classified as restricted deposits (excluded from broad money), if (1) depositors are expected to recover less than the full value of the deposits or (2) the full recovery of deposit funds is expected to occur after a protracted period.** These deposits should continue to be classified as restricted deposits as long as the nonoperating units continue to exist as legal entities. Reorganization, sale, or merger of the affected DCs may result in all or part of the deposits eventually becoming available to depositors. (*MFSM*, ¶308, revised)

[Note: Boldface text has been added for clarification.]

**6.39** The *MFSM* unequivocally states that the liabilities of nonoperating ODCs should be excluded from the monetary aggregates. This recommendation is qualified in this *Guide* in recognition that insured deposits in these ODCs may be as liquid as, or more liquid than, the least liquid liabilities included in the national definition of broad money. This *Guide* recommends that *all transferable deposits of these DCs should be moved to the category of Other deposits. Deposits in nonoperating ODCs may continue to be included in broad money to the extent that the deposits are covered by deposit insurance, when an FC is in liquidation, or if the depositors' accounts are to be transferred to a reorganized DC within a reasonable period (for example, within 12 months).*<sup>30</sup> Uninsured deposits in an ODC in liquidation are classified as *Other deposits excluded from broad money.*

<sup>30</sup>This recommendation can be applied to informal, or implicit, deposit insurance in a few countries where the central government is known to stand ready to fully reimburse depositors in the absence of deposit insurance or a formal guarantee.



**6.40** In the process of restructuring or liquidation, assets and liabilities of nonoperating DCs are frequently repackaged and auctioned or otherwise transferred to ODCs and emerge as balance-sheet items of the operating ODCs. Efforts should be made to ensure uninterrupted coverage of these assets and liabilities in the monetary statistics throughout the entire restructuring or liquidation process.

**6.41** Nonoperating DCs are intertwined in creditor/debtor relationships with ODCs and the central bank. Their reciprocal asset/liability positions are netted out in the consolidation of the *ODCS* and the *DCS*. In the absence of direct reporting by nonoperating FCs, data on their reciprocal asset/liability positions (and transactions, if any) with the central bank and operating FCs can be obtained from the accounts of the central bank and operating FCs.

**6.42** Each operating FC would be required to report its positions with nonoperating FCs in a format that would enable the monetary statistics compilers to aggregate the data into memorandum items in the sectoral balance sheets of the central bank, ODCs, and OFCs.<sup>31</sup>

**6.43** Reporting of positions may be a responsibility of the management of the closed FC or the receivership (trustee) who is overseeing the liquidation or reorganization. The reporting responsibilities often are delegated to a restructuring agency that is responsible for the liquidation of nonoperating FCs in a country in which several FCs are being dissolved simultaneously. The restructuring agency may function in a strictly custodial or fiduciary capacity, or may be structured to acquire assets and liabilities of the ODCs under liquidation.

**6.44** The monetary statistics compilers should request that the data reporters update the valuation of assets and liabilities to reflect the price and exchange rate changes during the reporting period. Even if no transactions that would affect the levels of assets or liabilities are undertaken during the period, the balance-sheet data need to be updated for valuation and currency-conversion changes. Valuation of assets and liabilities of the nonoperating FCs should follow the general principles recommended in the *MFSM* and this *Guide*.

<sup>31</sup>See Chapter 7, ¶7.34, and the memorandum items in the illustrative sectoral balance sheets in Appendix I of this *Guide*.

**6.45** Transactions in financial assets or liabilities of the nonoperating DCs should be recorded at the transaction prices. Any difference between the transaction price and the balance-sheet value of the financial asset or liability should be recorded as a valuation change.<sup>32</sup>

**6.46** Reserve deposits that nonoperating FCs hold in the central bank may be restricted or frozen for a time. Excess reserves of these corporations no longer are used to support credit expansion. The central bank deposits held by the nonoperating FCs may continue to be included in *Reserve deposits* or may be moved to *Other liabilities* within *Liabilities to ODCs* in the presentation of the *Monetary base* in the *CBS*.<sup>33</sup>

## Electronic Money

**6.47** Electronic money is defined as follows:

*Electronic money* is a payment instrument whereby monetary value is electronically stored on a technical device in the possession of the customer. The amount of stored monetary value is decreased or increased, as appropriate, whenever the owner of the device uses it to make purchase, sale, loading or unloading transactions.<sup>34</sup>

To qualify as electronic money, the payment instrument must represent *generalized purchasing power*—that is, must be usable for purchases of goods and services from a wide range of vendors.<sup>35</sup>

**6.48** Electronic money includes hardware-based and software-based products. Hardware-based devices (generally a plastic card with an embedded microprocessor chip) primarily are used for face-to-face payments but can also be used for remote payments by means of a card reader that is linked to an Internet connection. *Network money* refers to electronic money transferred through telecommunication chan-

<sup>32</sup>For example, if a loan asset with a book value of **100** is auctioned for **75**, a transaction of **75** and a valuation change of **25** (posted as an expense) would be recorded.

<sup>33</sup>If excluded from the monetary base, the deposits would be classified under the liability category of *Loans* in the *CBS*.

<sup>34</sup>European Central Bank (2000a), p. 49. The paper includes the legal definition from the European Parliament and Council Directive 2000/46/EC: “. . . ‘electronic money’ shall mean monetary value as represented by a claim on the issuer which is: (i) stored on an electronic device; (ii) issued on receipt of funds of an amount not less in value than the monetary value issued; (iii) accepted as a means of payment by undertakings other than the issuer.”

<sup>35</sup>For example, a fare card usable only to purchase rides on public transportation does not qualify, nor does a prepaid card usable only for purchases from a single merchant (even if the merchant is a department store with a large assortment of merchandise).

nels, by means of either hardware-based or software-based technology.

**6.49** The predominant forms of electronic money qualify as deposits rather than currency. The funds stored on the card are used for single third-party payments. The recipients of such payments usually must forward evidence of ownership of the funds to the card issuer for redemption (under *closed circulation of electronic money*). Less common is *open circulation of electronic money*, which takes on the characteristics of an electronic currency. As with banknotes and coins, open circulation allows the funds to be transferred through a sequence of buyer-to-buyer transactions without involvement of the issuer of the electronic money.<sup>36</sup>

**6.50** Nonfinancial corporations sometimes are allowed to issue electronic money, but most issuers are FCs. Data collection is straightforward for electronic money issued under closed circulation by ODCs, given that accounting for transactions and balances for the electronic money and accounting for regular transferable deposits are similar.<sup>37</sup>

**6.51** This *Guide* recommends that *electronic-money balances originated by ODCs should be classified as transferable deposits (disaggregated by economic sector of holder)*.<sup>38</sup> It is also recommended that *proliferation of electronic money instruments and issuers be accompanied by consideration of the following actions:*

- *Structural reclassification as ODCs for OFCs that have become issuers of significant amounts of electronic money.*
- *Collection of stock and flow data for electronic money issued by nonfinancial corporations.*<sup>39</sup>

<sup>36</sup>Whereas currency has physical features, security for electronic money transactions is provided by electronic cryptography for authentication, confidentiality, and data-processing integrity.

<sup>37</sup>In the loading of funds to the electronic-money card, the ODC depositor acquires “hand-held deposits” in exchange for regular deposits (or currency). The ODCs’ transactions with the recipients of the electronic funds are similar to electronic settlements for other types of transferable items.

<sup>38</sup>Presumably, the electronic money would be included in the national definition of broad money, as well as in the reservable deposit base for the calculation of required reserves.

<sup>39</sup>Depending on the type of payment arrangement and technological infrastructure, the data reporting may be directly to the monetary statistics compilers or may be channeled through ODCs. Conceptually, the payments services could become the major activity of a nonfinancial corporation, thereby qualifying it for reclassification as an FC.

### Box 6.1. Monetary Base: Representative Components<sup>1</sup> (MFSM, Box 6.2, revised)

#### Currency in circulation<sup>2</sup>

#### Central bank liabilities to ODCs

Transferable deposits (required reserves and clearing balances)

Other deposits

Securities issued by the central bank<sup>3</sup>

#### Central bank deposits included in broad money

[Replaces: liabilities. . .]

Transferable deposits

Other deposits

#### Central bank securities included in broad money

<sup>1</sup>Broader or narrower definitions of the monetary base may be used in the national context.

<sup>2</sup>Normally comprises currency holdings of all subsectors other than the central bank. In particular, the holdings of the central government, all FCs other than the central bank, and nonresidents are usually included along with the holdings of the other sectors. The currency component of the monetary base in the CBS, described in Chapter 7, includes only the national currency issued by the central bank.

<sup>3</sup>If holdings of these securities can be used in satisfying reserve requirements, they are included in the monetary base. Otherwise, such holdings are included or excluded, depending on the specific formulation and analytical use of the monetary base.

## Monetary Base

**6.52** The presentation of the monetary base in the CBS, as shown in Box 6.1, is a comprehensive representation for most countries. In countries where the central bank accepts deposits from money-holding sectors, those deposits usually are included in the national definitions of broad money and the monetary base. A separate line for *Deposits excluded from broad money* in the CBS is applicable in countries in which some or all central bank deposits held by money-holding sectors are excluded from broad money and the monetary base.<sup>40</sup>

**6.53** Most ODC deposits in the central bank are included in the monetary base. An exception may

<sup>40</sup>Money-holding-sector deposits in the central bank in one country are *included in* broad money, but are *excluded from* the monetary base. It has been recommended that the definition of the monetary base be reconsidered and, in the absence of revision, that these deposits be included in the line item in *Monetary base* (accompanied by an explanatory footnote in the country page in *IFS*).

arise when central banks sell securities to ODCs under repurchase agreements. In the methodology of the macroeconomic statistics, the repurchase agreement is classified as a collateralized loan.<sup>41</sup> For the central bank, the transaction is recorded as a new liability—a loan from the ODC—accompanied by a reduction in ODC deposits within the monetary base. In the *CBS*, the loan from the ODC is included either in the category of *Other liabilities* within *Liabilities to ODCs* or in *Loans* (which are excluded from the monetary base), depending on whether the monetary base is defined to include the loans arising from the securities repurchase transactions (Box 6.2).<sup>42</sup>

**6.54** The category *Liabilities to ODCs* within the *Monetary base* section of the *CBS* includes separate lines for *Reserve deposits* and *Other liabilities*. Both lines are applicable in countries that have separate accounts for required reserves and for ODC balances used for settlement purposes. In these countries, an ODC must maintain fixed amounts of reserves throughout the required reserve maintenance period. Other countries' reserve requirement systems allow averaging of an ODC's reserve holdings over the reserve maintenance period, and reserves held to satisfy reserve requirements are indistinguishable, within the reserve maintenance period, from reserves that ODCs hold for check clearing and/or other payment purposes. Only the line for *Reserve deposits* within the *Monetary base* section is applicable for countries that use reserve averaging in the specification of the reserve requirements. Additional information about required reserves is presented in Annex 6.1 of this chapter.

## Reporting of Monetary Aggregates to the IMF (Form 5SR)

**6.55** *Report Form 5SR for the Monetary Aggregates*<sup>43</sup> has three sections: (1) *Broad Money*, (2)

<sup>41</sup>See the *MFSM*, ¶145.

<sup>42</sup>Inclusion or exclusion from the monetary base will depend on the central banks' objective in engaging in the securities repurchase. If the objective were to reduce liquidity in the ODCs, the ODC loan would not qualify as a reservable asset (that is, would not contribute to satisfaction of reserve requirements), and the loan would be excluded from the monetary base. If the objective were to provide an interest-earning alternative to ODCs' non-interest-bearing reserves in the central bank, the loan could qualify as a reserve asset of the ODCs for inclusion in monetary base in the liability section of the *CBS*.

<sup>43</sup>The prototype for Form 5SR is shown in Appendix II of this *Guide*, along with the standardized report forms for the central bank (Form 1SR), ODCs (Form 2SR), and OFCs (Form 4SR).

### Box 6.2. Monetary Base in the Central Bank Survey

#### Monetary Base

Currency in circulation

#### Liabilities to ODCs

Reserve deposits

Other liabilities

#### Deposits included in broad money

Transferable deposits (disaggregated by money-holding sector)

Other deposits (disaggregated by money-holding sector)

#### Securities other than shares, included in broad money (disaggregated by money-holding sector)

*Broad Money Seasonally Adjusted*, and (3) *Monetary Aggregates*. *Broad Money* is disaggregated by financial instrument (currency, deposits, and securities other than shares) and by issuer (DCs, central government, and nonfinancial corporations), as shown in Box 6.3.

**6.56** The *Broad Money* section in Form 5SR is standardized across countries, but the data in the *Broad Money Seasonally Adjusted* and *Monetary Aggregates* sections are dependent on each country's procedures (if any) for seasonal adjustment and on the national definitions of the monetary aggregates (*M1*, *M2*, . . . , *Broad Money*).<sup>44</sup>

## Presentation of Monetary Aggregates in International Financial Statistics

**6.57** The new *IFS* presentation of a country's data (referred to as a *country page* in *IFS*) contains a separate *Monetary aggregates* section, which includes *Broad money* and its components, as shown in Box 6.3; lower-ordered monetary aggregates (for example, *M1* and *M2*, when *M3* is designated as *Broad money*); and *Broad money seasonally adjusted* (if estimated and reported by the country).

**6.58** *Broad money seasonally adjusted* also appears directly beneath the *DCS* section in the country

<sup>44</sup>These lines in Form 5SR are the only non-standardized lines in the standardized report forms.

### Box 6.3. Broad Money in Report Form 5SR for Monetary Aggregates

#### Broad Money

Currency in Circulation Outside DCs  
 Currency Issued by Central Government  
 Deposits in DCs  
 Deposits in Nonfinancial Corporations (including Electronic Money)  
 Securities Issued by DCs  
 Securities Issued by Central Government<sup>1</sup>

#### Broad Money Seasonally Adjusted

<sup>1</sup>Conceivably, a treasury or other unit of central government could accept deposits that are included in the national definition of broad money. Such deposits would be included in the line for *Securities Issued by Central Governments*, and the monetary statistics compilers would be informed of the inclusion.

page.<sup>45</sup> The seasonal adjustment for this series is performed by the IMF, which applies a single seasonal adjustment procedure to the unadjusted broad money data for each country. These data are the only *Broad money seasonally adjusted* series for those countries that do not produce their own seasonally adjusted data. For all countries, these are the data that have cross-country consistency with respect to seasonal adjustment methodology.

**6.59** Disaggregated data for DCs' broad-money liabilities are contained in the *IFS* country-page presentations of the *CBS* and the *ODCS*.

## Divisia Money

Money, which takes the form of various types of financial assets, is held for its usability as a medium of exchange, store of value, or both. In constructing broad-money aggregates, it is necessary to evaluate the degree of *mon-eyness* of a wide array of financial assets, focusing on the extent to which each type of financial asset provides *liquidity* and a store of value. Liquidity refers to the extent to which financial assets can be sold at, or close to, full market value on short notice. (*MFSM*, ¶287)

**6.60** Divisia money is a measure of the money supply that weights the money components—currency,

transferable deposits, time deposits, etc.—according to the usefulness of each component for transactions purposes.<sup>46</sup> The description of monetary aggregates in the *MFSM* (Chapter VI) focuses on a measure of broad money ( $M$ ) in which the money components ( $x_i$ ,  $i = 1, 2, \dots, N$ ) are weighted linearly and equally in the final total:  $M = \sum_{i=1}^N x_i$ , wherein the components ( $x_i$ s) are treated as perfect substitutes with respect to *mon-eyness*. A monetary aggregate that is an unweighted sum of components has the advantage of simplicity, but a monetary aggregate with weighted components may be expected to exhibit a stronger link to aggregate spending in an economy.

**6.61** In a Divisia money formulation, the money components are weighted unequally in accordance with their relative usefulness for making transactions, which is proxied by the *user costs* (opportunity costs) of holding the various money components. A *user cost* is measured by the spread between a benchmark rate—the interest rate paid on a financial asset that has no usefulness for making transactions in the short run—and the interest rate paid on a particular component of the monetary aggregate. The *user cost of the  $i$ th money component* is given by  $User\ cost_i = r_{B,t} - r_{i,t}$ , where  $r_{B,t}$  and  $r_{i,t}$  are the benchmark rate (after-tax) and the interest rate (after-tax) for the  $i$ th money component at time  $t$ .

**6.62** By weighting the monetary components, a Divisia money formulation takes account of the trade-off between the medium-of-exchange and store-of-value functions of the holding of the money components. It is assumed that relatively illiquid deposits are less likely to be used for transactions purposes than highly liquid financial assets in the money supply and that higher interest rates are paid on the less liquid money components. The largest weights tend to be attached to components that are directly usable as media of exchange (national currency and non-interest-bearing transferable deposits), but that are least useful as stores of value.<sup>47</sup> The smallest weights

<sup>46</sup>The Divisia index was originated by the French economist François Divisia (1925). Divisia money formulations utilize discrete-time approximations of the continuous-time Divisia index. On the development of the Divisia index for monetary aggregates, see Barnett (1980); Barnett, Offenbacher, and Spindt (1984); and Barnett, Fisher, and Serletis (1992).

<sup>47</sup>Box 6.4 shows that the weights depend on the user costs of the components, but also on the relative amounts outstanding of the various money components. For example, if the outstanding amount of currency is small relative to those of other money components, currency may still be allocated a smaller weight than some illiquid components.

<sup>45</sup>The *DCS* is shown in Table 7.11 in Annex 7.3 (Chapter 7).

### Box 6.4. Divisia Money (Bank of England Definition)

Divisia ( $D$ ) growth rates are calculated as weighted averages of the growth rates of the  $N$  components of a monetary aggregate, using the following equation:

$$\frac{D_t - D_{t-1}}{D_{t-1}} = \sum_{i=1}^N \frac{1}{2} (W_{it} + W_{i,t-1}) \frac{\Delta M_{it}}{M_{i,t-1}}$$

where  $M_{it}$  denotes the outstanding amount of the  $i$ th component of the monetary aggregate,  $\Delta M_{it}$  is the corresponding change, and  $W_{it}$  is the weight for the  $i$ th component, defined as:

$$W_{it} = \frac{M_{it} (r_{B,t} - r_{it})}{\sum_{i=1}^N M_{it} (r_{B,t} - r_{it})}$$

where  $r_{B,t}$  is the effective interest rate on the benchmark asset, and  $r_{it}$  is the effective rate on the  $i$ th asset.

tend to be assigned to the relatively illiquid components for which the interest rates are closest to the benchmark rate.

**6.63** Divisia money formulations originated in the United States, but have become most prominent at the Bank of England (BOE), which has published Divisia money series since 1993. The BOE publishes a Divisia money series for a broad money aggregate, as well as Divisia series for the money-holdings of separate money-holding sectors—that is, for the household sector, private nonfinancial corporations sector, and OFCs sector.<sup>48</sup>

The BOE equation for Divisia money is shown in Box 6.4.

## Credit and Debt

Measures of **debt** have the same three dimensions as monetary aggregates. Defining debt measures involves specifying (1) the liabilities included, (2) the issuing sectors (**borrowers**), and (3) the holding sector (**lenders**).

[Boldface text indicates revisions in *MFSM*, ¶334, first and second sentences. The revised sentences should be moved to *MFSM*, ¶348, first sentence.]

<sup>48</sup>On the BOE formulation of Divisia money, see Fisher, Hudson, and Pradhan (1993); and Janssen (1996). On recent revisions in the BOE formulation, see Hancock (2005a and 2005b).

Credit measures may cover all or only a subset of financial assets that constitute forms of credit. Narrow credit measures cover claims in the form of loans, securities other than shares, and trade credit and advances. Such measures exclude deposits, shares and other equity, financial derivatives, claims on life insurance corporations and pension funds in the form of insurance technical reserves, and other accounts receivable that are not part of trade credit. (*MFSM*, ¶337)

The *DCS* presented in Chapter VII provides the statistical framework for developing credit measures for DCs' claims. Broader measures may cover all FCs' claims, as included in the *FCS* described in Chapter VII. (*MFSM*, ¶340)

The Inter-Agency Task Force on Finance Statistics<sup>[†]</sup> . . . **has published** the *External Debt Statistics: Guide for Compilers and Users* (2003), which provides international methodological standards for the measurement of external debt, as well as guidance on the analytical use of the data and on the sources and methods for their compilation. The *Guide updates External Debt: Definition, Statistical Coverage, and Methodology*, 1988. (*MFSM*, ¶361, updated)

[†Prepared under the joint responsibility of the Bank for International Settlements, Commonwealth Secretariat, Eurostat, International Monetary Fund, Organization for Economic Co-operation and Development, Paris Club Secretariat, United Nations Conference on Trade and Development, and World Bank. (See Bank for International Settlements and others, 2003.)]

## Seasonal Adjustment of Economic Time Series

### General Principles

**6.64** Seasonal adjustment of economic time series involves the estimation and removal of influences that recur each year as a result of public holidays,<sup>49</sup> harvest seasons or other production cycles, model-year changeovers, administrative and legal measures, etc. Seasonal adjustment can be based on mathematical (deterministic) models, econometric (stochastic, or statistical) models, or both. Procedures that combine mathematical and econometric techniques are now widely used.

<sup>49</sup>Holidays such as Christmas or New Year occur on a fixed day and month of each year, whereas the dates of holidays such as Chinese New Year, Easter, Ramadan, and Deepavali move from year to year. Seasonal adjustment methods can accommodate both fixed and moving holidays.

**6.65** Many countries apply seasonal adjustment procedures to price statistics, GDP and other national accounts statistics, exports/imports and other balance of payments statistics, monetary and financial statistics, and other macroeconomic time series. Seasonal adjustment is applied to both monthly and quarterly data.<sup>50</sup>

**6.66** Seasonal adjustments of monetary aggregates and, to a lesser extent, credit aggregates are the most common applications of seasonal adjustment of monetary and financial statistics. This section describes the general application of seasonal adjustment methods with emphasis on seasonal adjustment of monetary aggregates.<sup>51</sup> Quarterly data for the monetary aggregates may be seasonally adjusted, but seasonally adjusted monthly data are viewed as the most relevant for analytical<sup>52</sup> and policy purposes in most countries. This section focuses on seasonal adjustment of monthly data for a monetary aggregate such as broad money, but the general principles apply to seasonal adjustment of quarterly monetary series and monthly and quarterly series for other economic variables.

#### Direct and Indirect Methods of Seasonal Adjustment

**6.67** Economic time series—monetary aggregates, GDP, and many others—consist of additive component series. Availability of separate time series for an aggregate and its components gives rise to three options for the seasonal adjustment:

- *Direct approach.* Seasonal adjustment of the aggregate time series to produce a seasonally adjusted series.
- *Indirect approach.* Seasonal adjustment of the individual components of the aggregate series to produce seasonally adjusted components that are summed to obtain the seasonally adjusted aggregate series.
- *Multivariate approach.* Simultaneous seasonal adjustment of the components of the aggregate or,

in some cases, simultaneous seasonal adjustment of the components of the aggregate *and* other economic time series that are linked to the aggregate series through a balance-sheet relationship.

**6.68** Direct seasonal adjustment is preferable from a cost standpoint, because the seasonal adjustment is performed only on the aggregate time series. However, indirect seasonal adjustment may be warranted, if the additional costs of seasonally adjusting a set of time series can be justified. Compilers are encouraged to experiment with both approaches. Because of cost considerations, the choice may be between a thoroughly analytical application of the direct approach and a relatively cursory application of the indirect approach, using the default options of a user-friendly software package for seasonal adjustment (described later in this section). This *Guide* recommends that, *if a choice between approaches is necessary, the analyst responsible for the seasonal adjustment of broad money should concentrate on a thorough application of the direct approach, utilizing as many of the diagnostic tools and other advanced features of the seasonal adjustment software as possible.*

**6.69** Application of the indirect approach can take various forms, depending on the way in which the components of the aggregate are defined. The components of broad money can be specified as currency outside DCs, transferable deposits, other deposits, and securities other than shares. Alternatively, the broad-money components can be less disaggregative: for example, A = M1 (that is, currency plus transferable deposits); B = M2 less M1; and C = Broad Money less M2. Components A, B, and C each would be seasonally adjusted, and the seasonally adjusted components would be summed to obtain the seasonally adjusted series for broad money.<sup>53</sup>

**6.70** An unambiguous decision rule for choosing between the direct and indirect methods of seasonal adjustment does not exist. The choice must be made on a case-by-case basis, after experimentation with both methods. Similarly, empirical analysis is required in deciding on the component series to be used, if the indirect method is chosen. For a specific

<sup>50</sup>Seasonal adjustment has also been applied to weekly and daily data, but with limited success.

<sup>51</sup>This section draws on documentation of the European Central Bank's methodology for seasonal adjustment of monetary aggregates and price statistics, as contained in European Central Bank (2000b). See also Manna and Peronaci (2003). On seasonal adjustment of national accounts statistics, see Bloem, Dippelsman, and Maehle (2001), Chapter VIII.

<sup>52</sup>Econometric model builders exercise a choice, testing their models using either seasonally adjusted data or unadjusted data. Using unadjusted data, seasonality in the data is reflected in the estimated coefficients and error terms of the models.

<sup>53</sup>Another alternative would be to disaggregate the deposit and securities components of the broad money series by economic sector of holder—public nonfinancial corporations, other nonfinancial corporations, other resident sectors, etc. *Such disaggregation is likely to be impractical and in general is not recommended for an indirect approach to seasonal adjustment of monetary aggregates.*

time series, several practical criteria have been recommended. These include (1) “smoothness” of the seasonally adjusted series,<sup>54</sup> (2) minimization of revision errors, (3) stability of seasonal components, and (4) out-of-sample forecasting accuracy. Informal “rules of thumb” are: (1) the direct approach has advantages when the components of the aggregate time series are highly correlated; (2) the indirect approach has advantages with respect to minimization of estimation and revision errors when the components have dissimilar stochastic (statistical) properties; and (3) the indirect approach has advantages when the contribution of each component, as a proportion of the aggregate, fluctuates significantly over the estimation period.<sup>55</sup>

**6.71** Application of the multivariate approach to seasonal adjustment, though conceptually appealing, has major practical limitations. For the monetary statistics, a major application would involve the simultaneous seasonal adjustment of categories for all assets (loans, securities other than shares, etc.), all broad-money components, and all other liabilities (deposits excluded from broad money, loans, etc.) in the *DCS*, while preserving the balance-sheet identity in the seasonal adjustment process.

**6.72** The multivariate approach is not advocated in this *Guide*, because of its computational complexity and software limitations. The most widely used software packages for seasonal adjustment, described later in this section, are designed exclusively for univariate (single-series) seasonal adjustment. Major advantages of these seasonal adjustment programs include ease of use, diversity of modeling specifications, and breadth of advanced statistical tools for specification of the seasonal adjustment model, estimation of the seasonal components, and diagnostic testing of the time-series output.

### Seasonal-Adjustment Software Packages

**6.73** The most popular seasonal adjustment packages, extensively applied worldwide, are the X-12-ARIMA program of the U.S. Census Bureau and the

combination of the TRAMO (Time-series Regression with ARIMA Noise, Missing Observations and Outliers) and SEATS (Signal Extraction in ARIMA Time Series) programs developed at the Bank of Spain.<sup>56</sup> The X-12-ARIMA and TRAMO/SEATS programs have statistical properties that are worthy of combining, which has prompted the development of an X-12-ARIMA-SEATS approach.

**6.74** The ARIMA module (called RegARIMA) in X-12-ARIMA and the TRAMO part of TRAMO/SEATS are similar in that both use time-series regression models to forecast (and “backcast”) input data and to detect and correct for outliers, calendar effects, missing observations, etc. The decomposition modules in X-12-ARIMA and SEATS are used to identify and estimate the trend-cycle, seasonal, and irregular components of a time series separately, but using different methods. The X-12-ARIMA method uses an existing set of moving-average filters, whereas the SEATS method uses ARIMA-based signal extraction with filters derived from the ARIMA-type modeling.

**6.75** The X-12-ARIMA program—still the most widely applied worldwide—is used by the IMF to seasonally adjust the monthly data for *Money* in the *IFS* country pages. Until recently, the seasonally adjusted money series in the *IFS* country pages were obtained by applying the X-11 Seasonal Adjustment Program. In 2002, the IMF began transitioning to use of X-12-ARIMA.<sup>57</sup> Application of X-12-ARIMA requires a time series that has a sufficient number of observations. As of end-2005, the requirements have been satisfied for nearly all countries, and data for the *Money, Seasonally Adjusted* in most *IFS* country pages have been based on X-12-ARIMA techniques. *Money, Seasonally Adjusted* refers to the money supply as narrowly defined. *Broad Money, Seasonally Adjusted* will appear in the revised presentation in the *IFS* country pages.<sup>58</sup>

<sup>54</sup>The smoothness criterion is specified in terms of “roughness measures” computed for seasonally adjusted series obtained by each approach. The criterion does not imply that seasonal adjustment is aimed at smoothing a time series, but seasonal adjustment generally leads to a time series with less variability.

<sup>55</sup>For more information, see European Central Bank (2000b), pp. 9–10. See also, Burnett (2006) and Thorp (2003), pp. 4–8.

<sup>56</sup>For further details, see Gómez and Maravall (1996).

<sup>57</sup>Bureau of the Census (1999).

<sup>58</sup>The IMF employs the automatic options in the X-12-ARIMA program, because of the magnitude of the task and the need to present data for which the seasonal adjustment is consistent across countries. Detailed examination of seasonality in the money series for about 180 individual countries on an ongoing basis is not feasible. Compilers are encouraged to undertake more detailed investigations in the national context, and more refined results can be reported to the IMF in Form 5SR, as well as being disseminated directly.

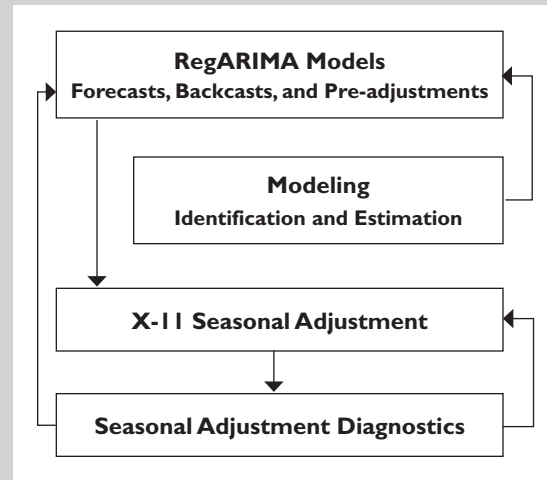
**6.76** The X-11 program<sup>59</sup> was based on a mathematical model that utilized ratio-to-moving-average specifications pioneered by Frederick B. Macaulay at the National Bureau of Economic Research in the 1920s. The X-11 designation indicated that the original X-1 program had undergone ten revisions and reached version X-11 by the late 1960s. Research at Statistics Canada in the early 1970s led to the seminal version of an X-11-ARIMA model,<sup>60</sup> which combined the mathematical procedures in X-11 with econometric techniques popularized in the 1969 edition of Box and Jenkins (1976).<sup>61</sup> Refinements have led to the current version of X-12-ARIMA, as published by the U.S. Bureau of the Census.

**6.77** The modular structure of the X-12-ARIMA program is shown in Box 6.5. The RegARIMA model is used to prepare the data input to the X-11 module in which the decomposition of the time series into trend/cycle, seasonal, and irregular components is performed. An important function of the regARIMA modeling is to extend the time series with pre-series estimates (backcasts) and post-series forecasts to improve the estimates of the seasonal adjustments to the earliest and most recent data, mitigating problems that would arise if asymmetric seasonal moving-average processes were used in the X-11 decomposition of the time series.

**6.78** A third stage of the seasonal adjustment process is statistical analysis of the data output of the X-11 module, including the seasonally adjusted time series. The analysis utilizes standard statistical tests and examination of out-of-sample forecasts of the seasonally adjusted data. The seasonal adjustment procedure may need to be an iterative process in which the RegARIMA and X-11 decomposition are repeated until the post-X-11 analysis indicates that the seasonal adjustment is satisfactory.<sup>62</sup>

**6.79** In a broad context, the post-estimation analysis subsumes the policies and procedures for revision of the seasonally adjusted data. Standard practice is to re-estimate the seasonal factors when additional

### Box 6.5. Structure of the X-12-ARIMA Estimation



time-series observations become available. Re-estimation and revision of the seasonally adjusted data can be performed on an annual basis or more or less frequently. The data revision policy—an important component of the seasonal adjustment framework—may call for several revisions of the seasonally adjusted time series, leading up to the seasonally adjusted series in final form.

### Custom Application of X-12-ARIMA

**6.80** For customized time-series models, X-12-ARIMA has capabilities for the three modeling stages: *identification*, *estimation*, and *diagnostic checking*. Use of the RegARIMA module requires specification of the regression variables in the model and of the ARIMA model for the regression errors. Specification of the regression variables depends on user knowledge about events that have influenced the time series.<sup>63</sup>

**6.81** *Identification* of the ARIMA model for the regression errors is based on well-established procedures in the Box-Jenkins (1976) analysis, which require examination of sample autocorrelation and partial autocorrelation functions generated by the

<sup>59</sup>Shiskin, Young, and Musgrave (1967). Revision stalled at version X-11, when Julius Shiskin was reassigned within the Bureau of the Census.

<sup>60</sup>See Dagum (1988).

<sup>61</sup>Box and Jenkins (1976). The third edition is Box, Jenkins, and Reinsel (1994).

<sup>62</sup>Residual seasonality sometimes is found in the adjusted data, leading to further empirical work.

<sup>63</sup>The regression variables usually are those specified from intervention modeling in which an exogenous effect on a time series can be specified as a short-lived spike in the data or as an effect that gradually increases or decreases (called a *ramp*) within a particular range of the time series. On intervention analysis, see Box and Tiao (1975). Also see Hillmer and Tiao (1982).



X-12-ARIMA program.<sup>64</sup> The general multiplicative seasonal ARIMA model is shown in Box 6.6.

**6.82 Parsimony** is a fundamental principle of the identification procedures. A model specification might include many parameters, when a simpler specification with fewer parameters would have been adequate. Such overspecification can lead to unnecessarily poor estimation of the time series. For example, specification of a moving-average process with a single parameter may substitute for an autoregressive process that has many parameters, or vice versa.<sup>65</sup>

**6.83 Estimation** of the parameters of the regARIMA model is performed by the X-12-ARIMA routine for maximum likelihood estimation using an iterative generalized least-squares algorithm.

**6.84 Diagnostic checking** involves analysis of the residuals from the fitted model to explore the possibility of model inadequacies. X-12-ARIMA produces several standard residual diagnostics for detecting additive outliers and level shifts in the data. The program also produces forecasts, forecast standard errors, and prediction intervals from the fitted regARIMA model.

### Decomposition of an Economic Time Series

**6.85** For seasonal adjustment purposes, a time series is decomposed into three major components:

- *Trend-cycle component* ( $T_t$ ). Constitutes the underlying path or general direction reflected in the data, combining the long-term trend and business-cycle movements.
- *Seasonal component* ( $S_t^c$ ). Comprises *seasonal effects narrowly defined* ( $S_t$ ) and calendar-related systemic effects that are not stable in timing from year to year, including *trading-day effects* ( $TD_t$ ), *moving-events effects* ( $ME_t$ ), and *other calendar effects* ( $OC_t$ ). *Trading-day effects* arise from year-to-year variations in the number of work days (trading days) and the weekday composition for

<sup>64</sup>*Spectral analysis* is also a useful tool for model identification. The *power spectrum* is the Fourier cosine transform of the autocovariance function. Spectral plots may reveal spikes at seasonal frequencies. For many applications, however, plots of the autocorrelation and partial autocorrelation functions are sufficient for identifying the ARIMA models. On spectral density functions, see Box and Jenkins (1976), pp. 39–45.

<sup>65</sup>On parsimony, see Box and Jenkins (1976), pp. 17–18, 302, 340.

### Box 6.6. ARIMA Models

ARIMA is the acronym for *Autoregressive Integrated Moving Average* models of time series with well-behaved statistical properties. The ARIMA model that is usually relevant for seasonal adjustment purposes is a multiplicative model that has autoregressive and moving-average terms (called a mixed autoregressive-moving-average model) specified with regular (period-to-period) and seasonal periodicity. The multiplicative characterization arises from the interaction of the period-to-period terms and seasonal terms in the model.

The *general multiplicative seasonal model* of order  $(p, d, q) \times (P, D, Q)$  is:

$$\varphi_p(B)\Phi_P(B^s)\Delta^d\Delta_s^D z_t = \theta_q(B)\Theta_Q(B^s)a_t,$$

where  $z_t$  denotes the original time series;  $\varphi_p, \Phi_P, \theta_q$ , and  $\Theta_P$  are finite polynomials in  $B$ , which is the backshift operator such that  $Bz_t = z_{t-1}$ ,  $B^2z_t = z_{t-2}$ , etc.;  $\Delta^d$  and  $\Delta^D$  are regular and seasonal difference operators (for example,  $\Delta z_t = z_t - z_{t-1}$  and  $\Delta^s z_t = z_t - z_{t-s}$ );  $s$  is the periodicity of the  $z_t$  (for example,  $s = 12$ , for monthly data); and  $a_t$  is a white-noise variable (zero mean and constant variance,  $V_a$ ).

An ARIMA model that does not have seasonal parameters (that is,  $P = D = Q = 0$ ) is specified as:

$$\varphi_p(B)\Delta^d z_t = \theta_q(B)a_t.$$

A well-behaved time series exhibits stationarity, and the error terms of the stochastic process that generates the time series have the appropriate statistical properties (that is, zero mean and constant variance). *Integrated* in *Autoregressive Integrated Moving Average* refers to removal of regular and seasonal trends in a non-stationary time series to obtain a stationary series. Integration most commonly is performed by differencing the non-stationary series (period to period and/or at seasonal intervals) to obtain a stationary series.

a particular month or quarter relative to the standard for a particular month or quarter.<sup>66</sup> *Moving-events effects* arise from occasions such as moving holidays, paydays for large groups of employees, and pension payments that occur at regular intervals but not at exactly the same time each year. The *other calendar effects* include leap-year and length-of-quarter effects. All seasonal subcomponents represent systematic, persistent, predictable, and identifiable effects.

- *Irregular component* ( $I_t^c$ ). Comprises the effects that are unpredictable in the absence of additional

<sup>66</sup>The period-to-period variation of the standard, or average, number and type of trading days for each month or quarter is included in the seasonal effect narrowly defined.

### Box 6.7. Three-Component Seasonal Adjustment Model in Multiplicative Form

#### The Model<sup>1</sup>

$$X_t = T_t \cdot S_t^c \cdot I_t = T_t \cdot (S_t \cdot TD_t \cdot ME_t \cdot OC_t) \cdot (I_t \cdot OUT_t \cdot OI_t),$$

where

$S_t = (S_t \cdot TD_t \cdot ME_t \cdot OC_t)$  is the seasonal component, and

$I_t = (I_t \cdot OUT_t \cdot OI_t)$  is the irregular component.

$TD_t$ ,  $ME_t$ , and  $OC_t$  are the *trading-day effects*, *moving events effects*, and *other calendar effects*, respectively.

The *seasonally adjusted series* is

$$A = T_t \cdot I_t = T_t \cdot (I_t \cdot OUT_t \cdot OI_t).$$

#### Basic Eight-Step Estimation:

- **Step 1: Initial estimate of the trend.** A symmetric 13-term moving average is applied to the original monthly time series to obtain an initial estimate of the trend. The trend is removed from the original data to obtain estimates of the seasonal and irregular components.
- **Step 2: Preliminary estimate of the seasonal component.** The estimate is obtained by applying a weighted 5-term moving average to each monthly observation obtained in Step 1. The seasonal components are adjusted to add to 12 over each 12-month period. Thereby, the average of these components is 1 and does not affect the level (trend) of the series.
- **Step 3: Preliminary estimate of adjusted data.** An approximation of the seasonally adjusted series is obtained by dividing each observation from the original time series by the seasonal component estimated in Step 2.
- **Step 4: Improved estimate of trend.** An additional moving average may be applied to the preliminary data from Step 3 to produce an improved estimate of the trend. The observations from the original time series are divided by the corresponding values from the improved trend series to obtain revised estimates of the seasonal and irregular components.
- **Step 5: Final estimate of seasonal components.** Step 2 is repeated to obtain seasonal components.
- **Step 6: Final estimate of adjusted data.** Each observation in the original time series is divided by the corresponding final estimate of the seasonal component, thereby obtaining the seasonally adjusted data in final form.
- **Step 7: Final estimate of trend.** An additional moving average is applied to the seasonally adjusted series obtained in Step 6, thereby deriving the final estimate of trend.
- **Step 8: Final estimate of irregular component.** The series is obtained by dividing the estimate from Step 6 by the corresponding trend estimate from Step 7.

<sup>1</sup>In the multiplicative class of models, some subcomponents may be expressed as additive to the irregular effect narrowly defined—for example, as:  $X_t = T_t \cdot S_t \cdot (I_t + OUT_t + OI_t + TD_t + ME_t + OC_t)$ .

information about the timing, impact, and duration of the occurrence. These effects are *irregular effects narrowly defined* ( $I_t$ ), *outlier effects* ( $OUT_t$ ), and *other irregular effects* ( $OI_t$ ).<sup>67</sup> The *irregular effects narrowly defined* is assumed to be a stochastic variable with a mean of 1 for a multiplicative model.

**6.86** Seasonal adjustment models can be specified in additive or multiplicative form. The default option in the X-12-ARIMA program is the multiplicative form, because that specification has proved to be superior for a wide variety of economic time series. In the multiplicative specification, the absolute sizes of the components of the series are dependent on each other, resulting in seasonal variations that increase and decrease with the level of the series. The seasonal and irregular components of the multiplicative model are ratios centered around a value of 1. The multiplicative specification in the decomposition module (still called the X-11 method) in the X-12-ARIMA program is shown in Box 6.7.

**6.87** The X-12-ARIMA program subsumes all the seasonal adjustment capabilities of the X-11 program. Though the X-11 options for calendar and holiday adjustments are still available, several new options have been added. These include new diagnostic procedures, a facility for producing the revision history of a given seasonal adjustment, new options for specifying the moving averages of trend filters, new options for seasonal filters and outlier detection in the irregular component, a table of trading-day factors by type of day, and a new model specification in pseudo-additive form.<sup>68</sup>

#### Seasonal Adjustment Revision Policy

**6.88** Seasonal adjustment analysis is not completed when the first set of data for the seasonally adjusted time series has been produced. Seasonally adjusted data for a time series can be improved by using the additional observations for the time series, as the

<sup>67</sup>Other *irregular effects* can arise from unseasonable weather, natural disasters, labor strikes, etc. However, such effects are mitigated, if they have been taken into account in the regular regression component of regARIMA in producing the input data for the decomposition in the X-11 module.

<sup>68</sup>The pseudo-additive model is tailored to series for which the value is zero in some period. Though unlikely to be applied to seasonal adjustment of monetary aggregates, the model may be useful for adjustment of time series for which source data are limited.

data become available. Seasonally adjusted data for monetary aggregates and other economic series may be revised several times before the latest revised data are deemed to be final. A general rule is that the seasonal adjustment is repeated until the revisions in the seasonal factors from successive re-estimations are small. Ideally, the concept of *small revisions* can be quantified and, where possible, revision statistics can be applied.<sup>69</sup> Determination of the periodicity of the revisions in seasonally adjusted series is left to the national authorities. *It is recommended that the data revision policy be formalized and the schedule for revised data release be publicized.*

## Annex 6.1. Reserve Requirements

### Reserve Requirements with Averaging of Reserve Holdings

**6.89** The following terminology applies:

- *Reservable liabilities.* The categories of deposits and, if applicable, securities that are subject to reserve requirements.
- *Reserve-computation period.* The period over which reservable liabilities are averaged to determine the reservable liability amounts to which the reserve requirements (in percent) are applied. Alternatively, the computations may be based on reservable liabilities as of a single date—for example, end-of-month levels.
- *Reserve-maintenance period.* The period over which the specified average amount of required reserves is to be held. In some countries, large ODCs have reserve-maintenance and -computation periods that are different from those for small ODCs.
- *Required reserves.* ODC deposit holdings in the central bank<sup>70</sup> that are used to satisfy reserve requirements. ODC holdings of national coins and currency—vault cash—also qualify as required reserves in some countries. Required reserves are average holdings during a reserve maintenance

period.<sup>71</sup> The reserve holdings may be interest-bearing or non-interest-bearing.

- *Lagged reserve requirements.* Required reserve holdings in the reserve-maintenance period are based on the average levels of reservable liabilities in a reserve-computation period that precedes the maintenance period.<sup>72</sup> The reserve-computation period may immediately precede the maintenance period, or may precede the maintenance period by one or more weeks or months.
- *Reserve settlement.* The accounting for required reserves at the end of the reserve-maintenance period. Excess reserves arise when the reserve holdings exceed the average amount required for the maintenance period. A reserve deficiency arises when the maintenance-period average holding is less than the required average amount. A reserve deficiency results in (1) a penalty being applied, (2) an ODC borrowing of reserves from the central bank, or (3) augmentation of the amount of reserves required for the next reserve-maintenance period (if the regulations include a reserve deficiency carry-over provision).
- *Reserve requirements.* The average amounts of average liabilities during the reserve computation period are multiplied by the required reserve ratios, normally stated as percentages of reservable liabilities. Many countries have differential reserve requirements—required reserve ratios that differ across categories of ODC liabilities. Deposits and securities in broad money may be subject to different reserve requirements. Different reserve ratios may also be applied (1) to transferable deposits and other deposits, (2) to short- and long-term other deposits, and (3) to household and corporate deposits. A deposit or security category may have a zero required reserve ratio (that is, may be excluded from reserve requirements). Some ODCs may be exempt from reserve requirements.<sup>73</sup> Reserve

<sup>69</sup>Various types of revision analysis have been suggested, including measures of total absolute revision, median absolute revision, mean absolute revision, root mean square revision, mean convergence, and smoothness of convergence. These statistics are described, and other information on revision policy is presented, in Maurin (2003).

<sup>70</sup>An exception in some countries is permitting some ODCs to hold all required reserves through an ODC that acts as an intermediary in centralizing the reserve holdings.

<sup>71</sup>In some countries, the required amount may be reduced by a lump-sum adjustment. Each ODC is permitted to reduce its required reserve by the lump-sum amount. For a small ODC, the lump-sum adjustment may exceed the total amount of required reserves that it would otherwise be required to maintain.

<sup>72</sup>In principle, the reserve-computation period and the reserve-maintenance period can be specified to overlap, resulting in contemporaneous or quasi-contemporaneous reserve requirements such as those applied in the United States during the 1984–98 and pre-1969 periods.

<sup>73</sup>An exemption sometimes applies to ODCs that are being liquidated or reorganized.

requirements normally apply only to broad money components.<sup>74</sup>

**6.90** *All ODC deposits to be used in satisfying reserve requirements (as well as for settlement purposes) are classified as transferable deposits in the sectoral balance sheets of the central bank and ODCs.*

### Reserve Requirements Without Averaging of Reserve Holdings

**6.91** The following terminology applies:

- *Reservable liabilities.* The categories of deposits and, if applicable, securities that are subject to reserve requirements.
- *Reserve-computation date.* Reservable liabilities usually are measured as of a particular date (for example, at end-month).
- *Reserve-maintenance period.* The period over which a specified level (rather than average amount) of required reserves must be maintained.
- *Required reserves.* ODC deposit holdings in the central bank (and possibly ODC vault cash) used

to satisfy reserve requirements. The reserve holdings may be interest-bearing or non-interest-bearing.

- *Lagged reserve requirements.* Required reserve holdings in the reserve-maintenance period are based on the amount of reservable liabilities as of the reserve computation date that preceded the maintenance period.
- *Reserve settlement.* The accounting for required reserves is on a daily basis. The fixed amount of required reserves applies for each day of the reserve maintenance period. Excess reserves are synonymous with ODCs' other deposits in the central bank—those used for check clearing and other settlement purposes and classified separately from required reserves.
- *Reserve requirements.* The levels of reservable liabilities, as of the reserve computation date, are multiplied by the required reserve ratios.

**6.92** *ODC deposits that are prespecified fixed amounts of required reserves are classified as other deposits (that is, nontransferable deposits) in the sectoral balance sheets of the central bank and ODCs. ODC deposits held in the central bank for settlement purposes are classified as transferable deposits in the sectoral balance sheets of the central bank and ODCs.*

<sup>74</sup>Exceptions are not precluded. For example, the ECB is authorized to impose reserve requirements against liabilities arising from off-balance-sheet items. Such reserve requirements are not currently applied.

# 7. Framework for Monetary Statistics

## Introduction

The framework for the monetary statistics recommended in this manual embodies two levels of data compilation and presentation. At the first level, stock and flow data reported by individual institutional units are aggregated into *sectoral balance sheets*, which contain comprehensive data for the individual FCs subsectors—that is, the central bank, other depository corporations, and other FCs. At the second level, the data in the sectoral balance sheets are consolidated into *surveys*. The data in the sectoral balance sheets are also used in the compilation of the financial statistics, as described in Chapter 8. (*MFSM*, ¶364)

**7.1** This chapter deals with the major facets of implementation of the monetary statistics, including:

- *Data reporting by financial corporations (FCs)*. Collection and assembly of the data that individual FCs report to the compilers of the monetary statistics.
- *Data compilation*. Aggregation of reported data to construct the sectoral balance sheets and consolidation of the sectoral balance sheets to obtain the surveys of the FC sector.
- *Data reporting to the IMF*. Reporting of the sectoral-balance-sheet data for analytical use and publication by the IMF.
- *Data dissemination*. Release and publication of the monetary data for a country, including publication in the IMF's *International Financial Statistics*.

**7.2** The generic presentation of the sectoral balance sheet for an FC, as shown in the *MFSM*, Table 7.1 (pp. 80–86), has been revised with regard to the categories of other accounts receivable/payable and the memorandum items. This chapter also contains recommendations on issues not addressed in the *MFSM*, including (1) an FC's data reporting to monetary statistics compilers, (2) central bank reporting of monetary data to the IMF, (3) dissemination of monetary statistics, and (4) disaggregated monetary data to

supplement those in the sectoral balance sheets and surveys of FCs.

**7.3** The numerical examples of surveys of FCs, presented in Annex 7.3 of this chapter, are revised versions of those in the *MFSM* (Tables 7.2–7.6, pp. 87–93).<sup>1</sup> The revised illustrations of sectoral balance sheets in Appendix I of this *Guide* are supported by numerical examples of *other changes in the volume of assets* (OCVA) entries (Annex 7.1) and a presentation of the consolidation adjustments needed in compiling the surveys (Annex 7.2). The illustration of a monetary authorities account (Annex 7.4) is based on the *Central Bank Survey (CBS)* (Annex 7.3) augmented by numerical examples for three categories of monetary authorities accounts of a central government. An illustrative scheme for the compilation of supplementary data on financial assets and liabilities in more disaggregated form is presented in Annex 7.5.

## Reporting by Financial Corporations

### General Principles

**7.4** A prerequisite for compilation of the monetary statistics—sectoral balance sheets, accompanying memorandum items, and surveys of FCs—is the accurate, comprehensive, and timely reporting of data that FCs have compiled in accordance with the financial asset classifications, economic sectorization, valuation methods, and other accounting rules, as described in Chapters 2–6 of this *Guide*.

**7.5** Currently, FCs in most countries report only stock data for the monetary statistics. This section is intended to provide guidance on the reporting of stock data, at present, and the general framework for

<sup>1</sup>The sectoral balance sheets used to derive the illustrative surveys of the FC sector are contained in Tables A1.1–A1.3 of Appendix I of this *Guide*.

future reporting of both stocks and flows in the sectoral balance sheets and memorandum items.

### Central Bank

**7.6** Reporting of monetary data for the central bank is comparatively easy, given that the data pertain to a single institutional unit and the data reporting entails only interdepartmental data transmittal—that is, reporting from the central bank’s accounting department to the monetary statistics compilers within the central bank.<sup>2</sup> The form of data reporting depends on the division of tasks within a central bank. The accounting department may be responsible for reporting the sectoral-balance-sheet data in final or nearly final form. Alternatively, the accounting department may be required to report the data in less compiled form.

**7.7** This *Guide* recommends that, *at a minimum, the accounting department of the central bank should report a single set of data wherein the accounts of the central bank headquarters, all domestic branches of the central bank, and any specialized subunits within the central bank subsector (for example, accounts of a currency board) have been consolidated.* In some cases, data reporting by other departments of the central bank—for example, a foreign exchange department or a securities department—may be required for completion of the sectoral balance sheet and/or accompanying memorandum items. At the discretion of central bank management, the data from these departments may be reported directly to the compilers or may be channeled through the accounting department for inclusion in its data reporting to the compilers.

**7.8** Comprehensive data reporting by the accounting department enables the monetary statistics compilers to concentrate on (1) verification and, if necessary, adjustment of the data to finalize the sectoral balance sheet of the central bank; (2) collection of the monetary data from the *other depository corporations* and *other financial corporations* (ODCs and OFCs, respectively); (3) compilation of the sectoral balance

sheets for the ODCs and OFCs; (4) consolidation of the data for the surveys of the FC sector—the *CBS*, *Other Depository Corporations Survey (ODCS)*, *Depository Corporations Survey (DCS)*, *Other Financial Corporations Survey (OFCS)*, and *Financial Corporations Survey (FCS)*—and (5) reporting and publication of the monetary statistics.

**7.9** Implementation of the data reporting requires close collaboration between the central bank’s accounting department and the monetary statistics compilers. *The accounting department should be provided with full documentation of the accounting rules that apply to the stock and flow data for the sectoral balance sheet of the central bank.* This documentation should be augmented with ongoing technical support from the monetary statistics compilers, contributing to the quality and timeliness of the data reported by the accounting department.

### Other Depository Corporations

**7.10** This *Guide* recommends that *ODCs should report stock and flow data in the format of the sectoral balances sheets and in accordance with the financial asset classifications, economic sectorization, and accounting rules of the MFSM and this Guide.* The advantages of this reporting are:

- *Compilation efficiency.* The reported data are comparable across FCs and are in a form that facilitates aggregation by the compilers.
- *Data quality.* From the compilers’ perspective, ODC reporting of extensive sets of supplementary data is a weak substitute for an ODC’s use of its own accounting records to impose the adding-up requirements for stock and flow data, as specified in the *MFSM* methodology, at the basic level of data compilation.<sup>3</sup>

**7.11** Implementation of new reporting forms requires relatively large investments of time and effort on the part of monetary statistics compilers and ODCs, which may be highly sensitive to increased costs of data reporting. For the compilers and users

<sup>2</sup>This statement holds at the level of central bank units in countries that belong to currency unions. An exceptional case is a currency union that has a unionwide central bank, but no central bank units for individual countries belonging to the union. Another exceptional case is a few small countries that do not have central banks. For the exceptional cases, the reporting procedures described in this section pertain to reporting to government agencies and/or FCs other than central banks, which are responsible for obtaining the data on central-bank-type activities at the national level.

<sup>3</sup>It may be tempting to use a preexisting form on which ODCs have been reporting prior to adoption of the methodology in the *MFSM* and this *Guide*. An ODC would provide the data for the categories on the report form, along with supplementary data for the compiler’s use in reformulating the data in accordance with the methodology of the *MFSM* and this *Guide*. Adoption of this approach would overburden the monetary statistics compilers and would compromise the quality of the data. *It is highly recommended that this approach be avoided.*

of monetary statistics, the benefits of adopting the new methodology will be viewed as far exceeding the costs. However, the central bank may need to convince the ODCs that their expenditures will be justified by the benefits of more and better information about their own activities and those of the entire ODC subsector.

**7.12** Major elements of implementation of the new reporting system include:

- *Reporting forms.* The new reporting forms can be designed with reference to the line items of Form 2SR, the format for standardized reporting of ODC data to the IMF, as described in *Reporting to the IMF* (§7.58–7.59 of this chapter). Initially, the reporting requirement may specify that only stock data for an ODC's balance-sheet accounts and memorandum items should be reported. However, foresight is needed in designing a numeric (or alphanumeric) data-coding system that later can be extended to include the reporting of flows—transactions, valuation changes, and OCVA.
- *Reporting instructions and other documentation.* The instructions for completion of the reporting forms can be developed with reference to the *Guidance Notes* that accompany Form 2SR for the reporting of ODC data to the IMF (see Appendix II of this *Guide*), as well as by making use of the material in the *MFSM* and this *Guide*. In addition, the ODCs should be informed that the *MFSM* and this *Guide* are available at the IMF website ([www.imf.org](http://www.imf.org)).
- *Training sessions.* The central bank will need to convene training sessions to provide the ODC reporters and their support staff with in-depth information on the methodology of the monetary statistics, report forms, and reporting procedures.
- *Technical support.* The central bank will need to provide a communication channel between the ODCs and the monetary statistics compilers who are in a position to assist the ODCs with the resolution of methodological and other issues associated with the implementation of the new reporting system. The need for technical assistance should be expected to extend beyond the introduction of the new reporting forms.

### Other Financial Corporations

**7.13** This *Guide* recommends that *the monetary statistics for each OFC should be reported in the format of the sectoral balance sheet and accompanying*

*memorandum items, as specified in the MFSM.*<sup>4</sup> The data reported by an OFC usually encompass fewer and less diverse categories of assets and liabilities, compared with the data reported by an ODC. The liability accounts of OFCs seldom include deposits,<sup>5</sup> and the financial assets and liabilities of many OFCs are likely to have comparatively few categories of debtor/creditor disaggregation by economic sector.<sup>6</sup> OFC reporting of quarterly or annual data (if applicable) is also easier, compared with the monthly data reporting of ODCs.

**7.14** For OFCs in many countries, the major reporting challenges arise from the large number and diversity of OFCs, as well as from multiple channels of existing data reporting. The OFCs are likely to outnumber ODCs by a wide margin, owing to the prevalence of insurance corporations, pension funds, and financial auxiliaries such as financial asset brokers and dealers. In some countries, OFC data reporting is incomplete or is not performed on a timely basis (or both); reporting by some categories of OFCs may not even exist.

**7.15** Ideally, all OFCs should report the monetary data on a timely basis directly to the data compilers in the central bank. Such reporting presently exists in relatively few countries. Instead, OFCs report to government agencies responsible for supervision of particular segments of the financial services industry—for example, national agencies for supervision of securities trading or the operation of organized exchanges, and national or state supervisors of insurance corporations or pension funds. Data reporting sometimes is channeled through trade associations or other nongovernment entities that represent the interests of specific groups of OFCs.

**7.16** Establishment of data reporting from OFCs directly to the monetary statistics compilers should result in improved data quality and more timely reporting. However, national policy may dictate that data reporting to the monetary statistics compilers be channeled through supervisory agencies to which OFCs already report.

<sup>4</sup>Alternatively, the reporting requirement can be stated in terms of the line items of Form 4SR, which are used for OFC data reporting to the IMF.

<sup>5</sup>An exception is margin deposit accounts at securities and financial derivatives dealers.

<sup>6</sup>For example, an OFC that specializes in retail financial services may have no liabilities to the central bank, central government, state and local government, public nonfinancial corporations, or nonresidents.

**7.17** Implementation of the OFC reporting involves steps similar to those for ODC reporting:

- *Reporting forms.* The new reporting forms can be designed around the line items of Form 4SR, the format for standardized reporting of OFC data to the IMF, as described in *Reporting to the IMF* (§§7.58–7.59 of this chapter).
- *Reporting instructions and other documentation.* The instructions for completion of the reporting forms can be developed with reference to the *Guidance Notes* that accompany the Form 4SR (see Appendix II of this *Guide*), as well as the material in the *MFSM* and this *Guide*.
- *Training sessions.* The central bank may need to sponsor training sessions for OFC reporters and for representatives of the government agencies or private entities through which the data for specific types of OFCs are reported to the monetary statistics compilers.
- *Technical support.* The central bank will need to provide a channel of communication between the OFCs and the monetary statistics compilers for initial and ongoing technical assistance in implementing the reporting system. Channels of communication will also be needed between the monetary statistics compilers and all government agencies or other entities responsible for data collection, when indirect OFC data reporting to the monetary statistics compilers is used.

## Sectoral Balance Sheets

*Aggregation* of data is the general rule for the reporting of data underlying the monetary and financial statistics. Aggregation entails the summation of stock or flow data across all institutional units within a particular group (that is, subsector or sector) and, for a given subsector, the summation of all stock or flow data within a particular asset or liability category. *Sectoral balance sheets*—the underlying data sets for the monetary and financial statistics—should be compiled as aggregated data. (*MFSM*, ¶186)

### General Principles

**7.18** The *MFSM* contains a description of the sectoral balance sheets (§§379–390), a general presentation of a sectoral balance sheet and accompanying memorandum items (Table 7.1, pp. 80–86), and illustrative sectoral balance sheets for a central bank, ODCs, and OFCs (Appendix 3, Tables 1–3, pp. 129–

148). This *Guide* presents relatively minor revisions in the general presentation of the sectoral balance sheet and accompanying memorandum items and in the numerical examples for the sectoral balance sheets (Appendix I, Tables A1.1–A1.3).

**7.19** Revision of the general presentation of a sectoral balance sheet is limited to the addition of subaccounts within the *Other* categories of *Other accounts receivable* and *Other accounts payable*, which have been expanded to include more disaggregation by type of financial asset or liability and by economic sector. The *Memorandum items* to accompany a sectoral balance sheet have been expanded to include a new type of data—claims on and liabilities to FCs in liquidation—but the disaggregation by economic sector for some items in Table 7.1 of the *MFSM* has been removed.

**7.20** The numerical examples in the illustrative sectoral balance sheets in Appendix 3 of the *MFSM* have been revised to be more realistic with regard to the debtor and creditor entries for some transactions and positions. Separate explanations and numerical tables for the OCVA entries in the illustrative sectoral balance sheets are presented in Annex 7.1 of this chapter.

**7.21** The *Balance-Sheet Data for Specific Categories of ODCs and OFCs* section in this chapter (§§7.35–7.38) describes additional subsectoral data that can be compiled from the balance-sheet data reported by ODCs and OFCs. Data compiled in this form, though not standard components of the monetary statistics, are of interest for more detailed analysis of institutional groupings within the ODC and OFC subsectors.

### Other Accounts Receivable/Payable

**7.22** This *Guide* recommends that *the data for Other accounts receivable—other should be more disaggregated than the categories shown in the general presentation of a sectoral balance sheet in the MFSM (Table 7.1, p. 81)*. Numerous subcategories of *Other accounts receivable/payable—other*, as obtainable from FCs' accounting ledgers, are described in Chapter 4 of this *Guide*. Revised classifications of data based on such accounting records for financial assets within *Other accounts receivable—other* are shown in Box 7.1.

**7.23** More extensive disaggregation of *Other accounts receivable—other* facilitates the compila-



**Box 7.1 Other Accounts Receivable—Other**
**MFSM**
**Resident sectors**
**Nonresidents**
**Guide**
**Resident sectors**

 Dividends receivable<sup>1</sup>

Settlement accounts

     Central bank<sup>2</sup>

     Other depository corporations<sup>3</sup>

     Other financial corporations<sup>4</sup>

     Central government<sup>5</sup>

     State and local government<sup>4</sup>

     Public nonfinancial corporations<sup>4</sup>

     Other nonfinancial corporations<sup>4</sup>

     Other resident sectors<sup>4</sup>

 Items in the process of collection<sup>6</sup>

 Miscellaneous asset items<sup>7</sup>
**Nonresidents**

 IMF quota subscription (central bank only)<sup>8</sup>

 Dividends receivable<sup>8</sup>

 Settlement accounts<sup>8</sup>

 Items in the process of collection<sup>8</sup>

 Miscellaneous asset items<sup>8</sup>

<sup>1</sup>Included in *Claims on other nonfinancial corporations* in all applicable surveys.

<sup>2</sup>Included in *Claims on central bank* in the *ODCS* and *OFCS*.

<sup>3</sup>Included in *Claims on other depository corporations* in the *CBS* and *OFCS*.

<sup>4</sup>Included in *Claims on other sectors* in applicable surveys.

<sup>5</sup>Included in *Claims on central government* in applicable surveys.

<sup>6</sup>Included in *Other assets* in the *CBS*, *ODCS*, and *OFCS*.

<sup>7</sup>Included in *Other assets* in the *CBS*, *ODCS*, and *OFCS*.

<sup>8</sup>Included in the *Other* category of *Claims on nonresidents* (that is, *foreign assets*) in all applicable surveys.

tion of more comprehensive data for total claims on individual economic sectors in the surveys of the FC sector. The amounts recorded in *Settlement accounts* often are small, compared with the total outstanding amounts for the categories of financial assets or liabilities. However, it is necessary to have detailed accounting (including disaggregation by economic sector) for the pending settlements to cover those circumstances in which one or more large-scale transactions in securities (or other type of financial assets) represent a relatively large-volume claim on the purchaser from whom the payment has yet to be received.

**7.24** *Dividends receivable* consists of those receivable on shares of nonfinancial corporations, as well

as those receivable on shares of FCs. In this *Guide*, it has been assumed that most dividends receivable will arise from ownership of shares in nonfinancial corporations. Separate categories for dividends receivable on shares of nonfinancial corporations and FCs, respectively, can be included in the presentation of *Other accounts receivable—other*, if separate data on *Dividends receivable on shares of FCs* are viewed as analytically significant in the national context.

**7.25** This *Guide* recommends that *the data for Other accounts payable—other should also be more disaggregated than the categories shown in the general presentation of a sectoral balance sheet in the MFSM (Table 7.1, page 85)*. Revised categories for the liabilities within *Other accounts payable—other* are shown in Box 7.2.

**7.26** Disaggregation of *Other accounts payable—other* facilitates more comprehensive coverage of liabilities to individual sectors, using the data from *Settlement accounts* disaggregated by economic sector to account for the contra-entries to FCs' purchases of assets for which payment has not yet been made.

**Other Changes in the Volume of Assets (OCVA)**

**7.27** Analysis of the monetary statistics often focuses on balance-sheet stocks and flows in the form of transaction and valuation changes. However, flows in the form of OCVA sometimes are of analytical interest, particularly when relatively large entries for OCVA occur. In the *MFSM* (§194), OCVA are grouped into six broad categories—*Economic appearance of intangible nonproduced assets*, *Catastrophic losses*, *Uncompensated seizures*, *Other volume changes in nonfinancial assets not elsewhere classified*, *Other volume changes in financial assets and liabilities not elsewhere classified*, and *Changes in classification and structure*, which is divided into *Changes in sector classification and structure* and *Changes in classification of assets and liabilities*.<sup>7</sup>

**7.28** In the framework of the monetary statistics, all OCVA entries are included in a single column of the presentation of a sectoral balance sheet. OCVA

<sup>7</sup>These categories appear in the 1993 *SNA*, along with other categories pertaining to accounts of nonfinancial corporations and government units—*Economic appearance of produced assets*, *Natural growth of non-cultivated biological resources*, and *Economic disappearance of nonproduced assets* (1993 *SNA*, ¶12.4–12.62).

**Box 7.2 Other Accounts Payable—Other****MFSM****Resident sectors****Nonresidents****Guide****Resident sectors**

- Provisions for losses on impaired financial assets (including claims on nonresidents)<sup>1</sup>
- Accumulated depreciation and impairment losses (on nonfinancial assets)<sup>1</sup>
- Consolidation adjustment for headquarters and branches<sup>1</sup>
- Dividends payable<sup>1</sup>
- Settlement accounts
  - Central bank<sup>2</sup>
  - Other depository corporations<sup>3</sup>
  - Central government<sup>4</sup>
  - State and local government<sup>5</sup>
  - Public nonfinancial corporations<sup>5</sup>
  - Other nonfinancial corporations<sup>5</sup>
  - Other resident sectors<sup>5</sup>
- Miscellaneous liability items<sup>1</sup>
- Nonresidents**
- Dividends payable<sup>6</sup>
- Settlement accounts<sup>6</sup>
- Miscellaneous liability items<sup>6</sup>

<sup>1</sup>Included in *Other liabilities* in all applicable surveys.<sup>2</sup>Included in *Liabilities to central bank* in the *ODCS* and *OFCS*.<sup>3</sup>Included in *Liabilities to other depository corporations* in the *CBS* and *OFCS*.<sup>4</sup>Included in *Liabilities to central government* in all surveys of the financial sector, where applicable.<sup>5</sup>Included in *Liabilities to other sectors* in all surveys where applicable.<sup>6</sup>Included in the *Other* category of *Liabilities to nonresidents* (that is, *foreign liabilities*) in all applicable surveys.

reported in the single-column format by each reporting institution can be aggregated across all ODCs and all OFCs, respectively, to obtain part or all of the OCVA data for the sectoral balance sheets. Aggregation of the data reported by individual ODCs and OFCs will provide all OCVA data for the sectoral balances in the absence of OCVA entries arising from *Changes in classification and structure*. These entries arise when an OFC has been reclassified as an ODC at the beginning of the reporting period (or an ODC has been reclassified as an OFC).<sup>8</sup>

<sup>8</sup>Reclassification of an ODC as an OFC is a less likely case, arising when an ODC no longer issues liabilities included in broad money. It is more common for OFC liabilities to be newly included in broad money, necessitating the ODC reclassification. Reclassification often may apply to several OFCs at the same time.

**7.29** An OFC may be newly authorized to issue liabilities (deposits or securities other than shares) included in the national definition of broad money, necessitating its reclassification as an ODC. Prior to the reporting period in which the OFC begins operating as an ODC, each monetary data reporter (including the central bank's accounting department) should have been informed of the OFC's reclassification. Having this information, each FC having claims on or liabilities to the reclassified institution is able to reclassify these accounts by economic sector. For example, if the reclassified institution has an outstanding loan from the central bank, the central bank's accounting department would reclassify the central bank's claim from *Loans—Other financial corporations* to *Loans—Other depository corporations* in the data reported to the compilers. If the reclassified institution holds transferable deposits in national currency units in an ODC, the ODC reclassifies its liability from the OFC subcategory of *Deposits included in broad money: Transferable deposits—In national currency* to the ODC subcategory of *Deposits excluded from broad money: Transferable deposits—In national currency*.<sup>9</sup>

**7.30** Given proper notification, the OFCs and ODCs can complete all reclassifications, by economic sector, for their *individual* claims on and liabilities to the reclassified FC. However, OCVA entries for the transfer of the entire balance sheet of the reclassified FC from the sectoral balance sheet of the OFCs to the sectoral balance sheet of the ODCs can be accomplished only when the data reported by the individual OFCs and ODCs are aggregated in compiling the sectoral balance sheets. The monetary statistics compilers are responsible for two sets of OCVA entries in the category of *Changes in classification and structure*: the full set of balance-sheet accounts of the reclassified FC is to be removed from the sectoral balance sheet of the OFCs, and the full set of these accounts is to be inserted in the sectoral balance sheet of the ODCs.

**7.31** The OCVA entries illustrated in Annex 7.1 include:

- *Catastrophic losses*. Loss on nonfinancial assets resulting from a catastrophic event.

<sup>9</sup>This example illustrates that the sectoral reclassification affects broad money, given that OFCs usually are treated as money holders (see *MFSM*, ¶316–320). By becoming an ODC, the former OFC has been transformed from a money holder to a money issuer.

- *Other volume changes in financial assets.* Write-off of loans, previously provisioned for loss in full, and write-off of securities other than shares, which have not been provisioned.
- *Changes in sector classification and structure.* Reclassification of an OFC as an ODC.
- *Changes in classification of assets and liabilities.* (1) Monetization of gold (central bank); (2) reclassification of loans, as securities; (3) inclusion of corporate repos in the definition of broad money; (4) revision in the definition of the securities component of broad money; (5) conversion of securities into shares; and (6) an appropriation from retained earnings to general and special reserves.

### Memorandum Items

**7.32** In the *MFSM* (Table 7.1, page 86), the memorandum items recommended for assets in the sectoral balance sheet are (1) central bank float (applicable to the central bank only), (2) total accrued interest on loans, (3) interest arrears on loans (disaggregated by economic sector of debtor), and (4) expected loan losses (disaggregated by economic sector of debtor). The memorandum items for liabilities are (1) total accrued interest on loans, (2) interest arrears on loans, and (3) market value of shares and other equity (disaggregated by economic sector of holder).

**7.33** The memorandum items, as revised in this *Guide*, are shown in Box 7.3. In revising the asset categories of memorandum items, the line item for *Loans: Of which interest arrears* has been changed to *Loans: Of which interest and principal arrears*, but the sectoral disaggregation of arrears has been deleted. However, the disaggregation by economic sector of debtor for *Loans: Of which expected losses* has been retained, given that the amounts of the expected losses (together with the sectoral balance-sheet data on outstanding loans) are required for calculation of the expected realizable value of loans by economic sector.

**7.34** New categories of memorandum items have been added to provide data for FCs' claims on and liabilities to FCs in liquidation or awaiting reorganization. These data, disaggregated by type of financial asset/liability, are needed for the consolidation of the sectoral balance sheets in compiling the surveys (*ODCS*, *DCS*, *OFCS*, and *FCS*). Despite best efforts, the central bank may be unable to obtain regular and

### Box 7.3. Memorandum Items to Accompany a Sectoral Balance Sheet (MFSM Table 7.1, Revised)

#### Assets

Central bank float (applicable to central bank only)<sup>1</sup>  
 Loans: Of which accrued interest  
 Loans: Of which interest and principal arrears  
 Loans: Of which expected losses  
     {By economic sector of debtor}  
 Securities other than shares: Of which accrued interest  
 Claims on ODCs in liquidation or reorganization  
     (closed institutions)  
     {By type of financial asset<sup>2</sup>}  
 Claims on OFCs in liquidation or reorganization  
     (closed institutions)  
     {By type of financial asset<sup>2</sup>}

#### Liabilities

Loans: Of which accrued interest  
 Loans: Of which interest and principal arrears  
     {Subcategory for arrears on IMF loans to the central bank}  
 Shares and other equity: Market value  
     {By holding sector}  
 Liabilities to ODCs in liquidation or reorganization  
     (closed institutions)  
     {By type of liability<sup>2</sup>}  
 Liabilities to OFCs in liquidation or reorganization  
     (closed institutions)  
     {By type of liability<sup>2</sup>}

<sup>1</sup>Central bank float appears only for central banks that provide advanced availability of funds (that is, availability prior to collection) for items in the process of collection. See *MFSM*, ¶399 and Table 7.1, footnote 6, p. 86.

<sup>2</sup>Transferable deposits, other deposits, securities other than shares, loans, shares and other equity, financial derivatives, and other accounts receivable/payable.

timely reporting of data directly from closed FCs. Availability of these memorandum items, which are reported by the FCs that are in operation, enables the compilers to complete the data consolidation across both operating and closed ODCs and OFCs.

### Balance-Sheet Data for Specific Categories of ODCs and OFCs

**7.35** The sectoral balance sheets of the central bank, ODCs, and OFCs are standard components of the monetary statistics, which are used to derive the consolidated data in the *CBS*, *ODCS*, and *OFCS*. In some national contexts, other aggregations of the monetary data reported by the ODCs and OFCs are useful for analyzing the activities of specific groups

of ODCs and OFCs. For example, the data submitted by the ODCs can be sorted and aggregated by size or ownership attributes of the ODCs. Separate sets of aggregate data of the sectoral-balance-sheet type can be compiled for (1) large and small ODCs; (2) government- and private-owned ODCs; (3) foreign- and domestic-owned ODCs; and (4) offshore FCs.<sup>10</sup>

**7.36** Similar types of aggregated data can be compiled for subcategories within the OFC subsector. The data submitted by individual OFCs can be sorted and aggregated by size or ownership of the institutional units, but sorting and aggregating by type of financial services is likely to be most useful. Separate sets of aggregated data can be compiled for (1) other financial intermediaries, (2) insurance corporations, (3) pension funds, and (4) financial auxiliaries.<sup>11</sup> From the data reported by other financial intermediaries, separate sets of aggregated data can be compiled for FCs, financial leasing corporations, investment pools, securities underwriters and dealers, etc. (see *MFSM*, ¶100). Similarly for financial auxiliaries, separate data can be compiled for public exchanges and securities markets, brokers and agents, foreign exchange companies, etc. (see *MFSM*, ¶101).

**7.37** Unlike the sectoral balance sheets for ODCs and OFCs, the balance-sheet data for subcategories of ODCs and OFCs cannot be consolidated into surveys. The format of the sectoral balance sheet does not contain separate line items for the many sets of claims and liabilities that usually exist between the more finely divided categories of FCs. Consolidation of the data is impossible in the absence of data for such line items. However, the aggregated data should be adequate for many analytical purposes.

**7.38** Access to separate balance-sheet data for small groupings of ODCs and OFCs may be restricted, and dissemination may not be permitted within the national regulations governing the confidentiality of data for an individual institutional unit or small group of units.

<sup>10</sup>This applies to offshore FCs that issue some liabilities included in broad money and therefore are classified as ODCs. If offshore FCs are classified as OFCs, the separate data for offshore FCs can be obtained by aggregating the data from their submissions for the sectoral balance sheet for OFCs.

<sup>11</sup>Availability of these data compensates, to a limited extent, for the grouping together of these institutional units in the category of OFCs—a basic sectorization feature of the monetary statistics methodology.

## Surveys of Financial Corporations

### General Principles

**7.39** The sectoral balance sheets for the central bank, ODCs, and OFCs are the sources of all data for the compilation of the *CBS*, *ODCS*, and *OFCS*. From a compiler's perspective, the *CBS* and *ODCS* are complete sets of source data for the *DCS*, as well as being final outputs of monetary statistics. Similarly, the *DCS* and *OFCS* contain all source data for the *FCS*.

**7.40** Broad features of compilation and presentation of the surveys are described in the *MFSM*, Chapter 7 (¶395–402). Additional information on the aggregation of financial assets and liabilities and the consolidation of data across FCs is provided in this section of the *Guide*.

**7.41** All survey categories of assets and liabilities are presented on a gross basis, except claims on and liabilities to nonresidents, claims on and liabilities to central government, and *Other items (net)*. FCs' net claims on nonresidents (that is, *Net foreign assets*) and *Net claims on central government* are shown in the asset section of each survey, along with separate lines for total claims and total liabilities. *Other items (net)* is the miscellaneous category of each survey, consisting of the net liability for all balance-sheet accounts not included elsewhere in a survey.

### Claims on and Liabilities to Nonresidents

**7.42** In the *CBS*, *ODCS*, and *OFCS*, *Claims on nonresidents* are disaggregated into separate categories for *Foreign currency*, *Deposits*, *Securities other than shares*, *Loans*, *Financial derivatives*, and *Other*. The *Other* category consists of *Insurance technical reserves—Nonresidents* (in the category of *Prepayment of insurance premiums and reserves against outstanding claims*) and *Other accounts receivable* in the nonresident subcategories of *Trade credit and advances*, *Dividends receivable*, *Settlement accounts*, *Items in the process of collection*, *Miscellaneous asset items*, and *IMF quota subscription (CBS only)*. The *DCS* and *FCS* show *Claims on nonresidents* without disaggregation.

**7.43** In the *CBS*, *ODCS*, and *OFCS*, *Liabilities to nonresidents* are presented in the same format as *Claims on nonresidents*, excluding *Monetary gold*

**Box 7.4. Financial Assets in the Surveys: Major Categories for Resident Sectors**
**A. By sector of debtor**

*Claims on other depository corporations*  
*Claims on central bank*  
*Claims on depository corporations*  
*Claims on central government*  
*Claims on other sectors*  
     *Claims on other FCs*  
     *Claims on state and local government*  
     *Claims on public nonfinancial corporations*  
     *Claims on other nonfinancial corporations*  
     *Claims on other resident sectors*

**B. Financial assets included in *Claims on* . . .**

1. National currency
2. Deposits
3. Securities other than shares
4. Loans
5. Shares and other equity
6. Financial derivatives
7. Insurance technical reserves—OFCs
  - 7.1. Prepayment of insurance premiums
  - 7.2. Reserves against outstanding claims
8. Other accounts receivable
  - 8.1. Trade credit and advances
  - 8.2. Settlement accounts
  - 8.3. Dividends receivable

**A. Survey**

CBS  
 ODCS  
 OFCS  
 All surveys  
  
 CBS, ODCS, and DCS  
 All surveys  
 All surveys  
 All surveys  
 All surveys

**B. “*Claims on*” category**

*Claims on central bank (ODCS and OFCS)*  
*Claims on depository corporations (OFCS)*  
 All *Claims on presentations*  
 All *Claims on presentations*  
 All *Claims on presentations*  
 All *Claims on presentations*  
 All *Claims on presentations*  
  
*Claims on OFCs*  
*Claims on OFCs*  
  
 All *Claims on presentations*  
 All *Claims on presentations*  
*Claims on other nonfinancial corporations only*

and SDR holdings (CBS only) and foreign currency. The separate categories are *Deposits*, *Securities other than shares*, *Loans*, *Financial derivatives*, and *Other*. The *Other* category consists of *Insurance technical reserves—Nonresidents* (in the category of *Prepayment of insurance premiums and reserves against outstanding claims*) and *Other accounts payable* in the nonresident subcategories of *Trade credit and advances*, *Dividends payable*, *Settlement accounts*, and *Miscellaneous liability items*. In the DCS and FCS, only single lines for *Liabilities to nonresidents* are shown.

**Claims on Resident Sectors**

**7.44** Financial assets are presented as *Claims on* various economic sectors and subsectors. The sectoral categories, which cover the claims on all resident units, are shown in Panel A of Box 7.4. Each *Claims on* category includes a common set of major financial assets—deposits, securities other than shares, loans, shares and other equity, and financial derivatives—as well as the subcategories of *Trade credit and advances* and *Settlement accounts* within *Other accounts receivable*. The financial assets

included in only some categories are national currency (*Claims on the central bank* only), *Prepayment of insurance premiums and reserves against outstanding claims* within *Insurance technical reserves (Claims on other FCs* only), and *Dividends receivable (Claims on other nonfinancial corporations* only).<sup>12</sup>

**Liabilities to Resident Sectors**

**7.45** The liability categories in the surveys are shown in Box 7.5. The main classification is by financial instrument—currency,<sup>13</sup> deposits, securities other

<sup>12</sup>This treatment of dividends receivable is based on practicality. In many countries, most dividends arise from holdings of equity shares of nonfinancial corporations. In the national context, *Dividends receivable* can be disaggregated and allocated to *Claims on other DCs* and *Claims on other FCs*, as well as to *Claims on other nonfinancial corporations*, if FCs' holdings of dividend-paying shares in ODCs and OFCs are significant. In a few countries, ODCs (and possibly OFCs) hold central bank shares, but dividends on these shares are minor items.

<sup>13</sup>The liability categories for national currency are *Currency in circulation* (in the CBS), *Currency outside DCs* (in the DCS), and *Currency outside FCs* (in the FCS). *Monetary base*—a liability classification in the CBS only—is covered in Chapter 6 of both the MFSM and this Guide.

### Box 7.5. Liabilities in the Surveys: Major Categories for Resident Sectors

<b>A. Liabilities</b>	<b>A. Survey</b>
Monetary base	CBS
Currency in circulation	CBS
Currency outside DCs	DCS
Currency outside FCs	FCS
Liabilities to other depository corporations	CBS
Liabilities to central government <sup>1</sup>	All surveys
Liabilities to central bank	ODCS
Deposits included in broad money	CBS, ODCS
Transferable deposits	CBS, ODCS, DCS
Other deposits	CBS, ODCS, DCS
Deposits excluded from broad money	CBS, ODCS, DCS
Deposits	OFCS, FCS
Securities other than shares, included in broad money	CBS, ODCS, DCS
Securities other than shares, excluded from broad money	CBS, ODCS, DCS
Securities other than shares	OFCS, FCS
Loans	All surveys
Financial derivatives	All surveys
Insurance technical reserves	OFCS, FCS
Trade credit and advances	All surveys
Settlement accounts <sup>2</sup>	All surveys
Shares and other equity	All surveys
<b>B. Other items (net)</b>	<b>All surveys</b>
Other liabilities	All surveys
less: Other assets	All surveys
plus: Consolidation adjustment	ODCS, DCS, OFCS, and FCS

<sup>1</sup>Deposits, Securities other than shares, Loans, Financial derivatives, Insurance technical reserves (OFCS and FCS only), Trade credit and advances, and Settlement accounts.

<sup>2</sup>This category did not appear in the surveys in the MFSM.

than shares, loans, financial derivatives, trade credit and advances, settlement accounts, and shares and other equity. In the CBS, *Liabilities to other depository corporations* are disaggregated into separate categories for *Reserve deposits* and *Other liabilities*, whereas only a single category of *Liabilities to the central bank* is presented in the ODCS.

**7.46** In the liability sections of the CBS, ODCS, and DCS, deposits and securities other than shares are each disaggregated into separate categories for those included in broad money and those excluded from broad money. *Deposits included in broad money* are disaggregated into *Transferable deposits* and *Other*

*deposits*, and these categories are further disaggregated by money-holding sector (that is, economic sector of creditor). *Securities other than shares, included in broad money* is also disaggregated by money-holding sector.

**7.47** The DCS shows the total amount of broad-money liabilities of the FCs sector, disaggregated into *Currency outside depository corporations*, *Transferable deposits*, *Other deposits*, and *Securities other than shares*. The deposits and securities are further disaggregated by money-holding sector. For many countries, *Broad money liabilities* in the DCS accounts for broad money in its entirety.<sup>14</sup>

**7.48** The FCS shows FCs' liabilities for *Deposits* and *Securities other than shares* irrespective of whether the deposits and securities are components of broad money. All OFC holdings of *Deposits* and *Securities other than shares* issued by DCs are excluded from the FCS in the process of consolidating the DCS and OFCS data. Therefore, the FCS coverage of broad-money liabilities is less complete than the DCS—to the extent that OFC holdings of deposits and securities other than shares are included in broad money.<sup>15</sup>

**7.49** In the CBS, ODCS, and OFCS, *Shares and other equity* is disaggregated into separate components for *Funds contributed by owners*, *Retained earnings*, *General and special reserves*, *SDR allocations* (CBS only), and *Valuation adjustment*. The DCS and FCS show only the aggregated amount of *Shares and other equity* for all DCs and all FCs, respectively. In each survey, *Shares and other equity* is shown on an aggregated (that is, unconsolidated) basis. Equity shares of ODCs may be held by other ODCs or OFCs. Similarly, equity shares of OFCs may be held by other OFCs or ODCs.<sup>16</sup> These inter-FC-sector holdings of equity shares are not deducted

<sup>14</sup>Compilation of broad money for countries in which the national definitions include liabilities of central government, other nonfinancial sectors, or nonresidents is described in Chapter 6 of this Guide.

<sup>15</sup>The FCS data for *Deposits* and *Securities other than shares* are useful for analysis of other sectors' claims on the FCs sector, but are of limited value for monetary analysis. These data include deposits and securities excluded from broad money, but exclude the OFC's holdings of deposits and securities included in broad money.

<sup>16</sup>In exceptional circumstances, the central bank also holds equity shares of an ODC or OFC.

in compiling the liability account for *Shares and other equity* in any survey.<sup>17</sup>

**7.50** *Other items (net)*, which is presented in each survey as a liability, may be positive (net liability) or negative (net asset). *Other items (net)* is given by *Other liabilities* less *Other assets* plus *Consolidation adjustment*. *Other liabilities* comprises the resident categories of *Other accounts payable—other*, excluding *Settlement accounts*. The individual accounts are *Provisions for losses on impaired financial assets*, *Accumulated depreciation and impairment losses on nonfinancial assets*, *Consolidation adjustment for branches and headquarters*, and *Dividends payable*. *Other assets* consists of *Items in the process of collection* and *Miscellaneous asset items*—the resident categories of *Other accounts receivable—other* not included in *Dividends receivable* and *Settlement accounts*.

Consolidation entails the “canceling out” of stocks and flows that arise from financial claims and corresponding obligations *between* the institutional units within the financial sector or subsector covered by a particular survey. (MFSM, ¶187)

**7.51** The three forms of consolidation in the sectoral balance sheets and surveys are:

- *Consolidation in the sectoral balance sheets*. The sectoral balance sheets of the central bank, ODCs, and OFCs contain accounts for *Consolidation adjustment for branches and headquarters* (within *Other accounts payable—other*), which are included in *Other liabilities*. In the sectoral balance sheet of the central bank, *Consolidation adjustment for branches and headquarters* shows the net discrepancy from consolidating the accounts of the head office and branches (and, if relevant, central-bank units such as currency boards). In the sectoral balance sheet of the ODCs or the sectoral balance sheet of the OFCs, *Consolidation adjustment for branches and headquarters* shows the net discrepancy calculated by summation of the con-

solidation adjustments reported by the individual ODCs or OFCs.

- *Consolidation in the ODCS and OFCS*. *Consolidation adjustment* within *Other items (net)* in the *ODCS* or *OFCS* shows the discrepancy that remains after netting out inter-ODC or inter-OFC claims and liabilities in the consolidation.
- *Consolidation in the DCS and FCS*. *Consolidation adjustment* within *Other items (net)* in the *DCS* or *FCS* shows the discrepancy that remains after netting out inter-depository-corporation or inter-financial-corporation claims and liabilities in the consolidation process.

**7.52** *Consolidation adjustments* in the *ODCS* and *OFCS* are illustrated in Table 7.4 and Table 7.6, respectively, in Annex 7.2. The illustrations are based on the numerical examples for the sectoral balance sheets in Table A1.2 and Table A1.3 in Appendix I of this *Guide*. In the illustration for the *ODCS* in Table 7.4, ODC claims on other ODCs (corresponding to ODC liabilities to other ODCs) pertain to the categories of *Deposits*, *Securities other than shares*, *Loans*, *Financial derivatives*, *Trade credit and advances*, and *Settlement accounts*. In the illustration for the *OFCS* in Table 7.6, OFC claims on other OFCs (corresponding to OFC liabilities to other OFCs) are in the form of *Securities other than shares*, *Loans*, *Shares and other equity*, *Insurance technical reserves*, *Financial derivatives*, *Trade credit and advances*, and *Settlement accounts*.

**7.53** *Consolidation adjustment* in the *DCS* is illustrated in Table 7.5 in Annex 7.2, using the numerical examples for the *CBS* and *ODCS* in Table 7.8 and Table 7.9, respectively, in Annex 7.3. In the illustration in Table 7.5, central bank liabilities to the ODCs are *Reserve deposits* and *Other liabilities*, as classified in the *CBS*. *ODCS* claims on the central bank are *Reserve deposits* and *Other claims*, as shown in the *ODCS*. Table 7.5 also shows *Liabilities to the CB* (central bank) (as recorded in the *ODCS*) and *Claims on other depository corporations* (as recorded in the *CBS*). *Consolidation adjustment* in the *DCS* includes the *Consolidation adjustment* in the *ODCS* (Table 7.4), as well as the amount of discrepancy between the corresponding accounts in the *CBS* and *ODCS*.

**7.54** *Consolidation adjustment* in the *FCS* is illustrated in Table 7.7 in Annex 7.2, using the numerical examples for the *OFCS* and *DCS* in Table 7.10 and Table 7.11, respectively, in Annex 7.3. Calcula-

<sup>17</sup>The aggregate data for shares and other equity are appropriate in the context of the monetary statistics, given that equity liabilities are recorded at book value, whereas equity holdings are at market or fair value. Though not part of the surveys, consolidated data on equity of the central bank, ODCs, or OFCs can be calculated from the data for market or fair value of central bank, ODC, and OFC equity, which are disaggregated by holding sector in the memorandum items of the sectoral balance sheets.

tion of *Consolidation adjustment* is facilitated by the inclusion of lines for *Of which: Other financial corporations* within liability categories in the *DCS* and lines for *Of which: Depository corporations* in the *OFCS*. As shown in Table 7.7, assets in the calculation of the *Consolidation adjustment* are *Claims on other sectors—Other financial corporations (DCS, Table 7.11)* and *Claims on Depository Corporations (OFCS, Table 7.10)*. For both OFC liabilities to depository corporations (*OFCS*) and depository corporations liabilities to OFCs (*DCS*), the categories include *Securities other than shares, Loans*,<sup>18</sup> *Financial derivatives, Trade credit and advances*, and *Settlement accounts*. DC liabilities to OFCs also include *Deposits included in broad money* and *Deposits excluded from broad money (DCS)*, and OFC liabilities to DCs include *Insurance technical reserves—Prepayment of premiums and reserves for outstanding claims*. *Consolidation adjustment* in the *FCS* also includes *Consolidation adjustment* in the *OFCS* (Table 7.10) and *Consolidation adjustment* in the *DCS* (Table 7.11).

## Monetary Authorities Account

The *CBS* covers only central banking functions performed by the central bank. In some countries, however, certain central banking functions are performed wholly or partly by the central government. These include currency issuance, the holding of international reserves, and the conducting of transactions with the IMF. In such situations, consideration could be given to compiling a monetary authorities account. (*MFSM*, ¶403)

**7.55** A *monetary authorities account*, as illustrated in Table 7.13 in Annex 7.4, is a presentation of a central bank survey that has been augmented with line items associated with central banking functions performed by the central government. In the illustration, the accounts include (1) a government liability for the issuance of currency (typically coins), (2) a government liability for financial obligations to the IMF, and (3) government assets (typically, foreign exchange holdings) that are part of official international reserves.

<sup>18</sup>OFC loans to DCs do not appear in the illustration, where all OFC placements of funds in DCs are assumed to take the form of deposits. However, this category could appear in a national context if, for example, an OFC provided a loan (rather than deposit) to a parent or subsidiary ODC.

**7.56** A government liability that is routed to the *monetary authorities account* is matched by a contra-entry representing a claim on the central government, and an entry for a central government asset is matched by a contra-entry representing a liability to the central government.

**7.57** This *Guide* recommends that *each entry and contra-entry should be presented as a separate line item in the monetary authorities account*.<sup>19</sup> As shown in Table 7.13 of Annex 7.4, the relevant accounts are:

- *Currency issuance—central government* (a component of the *Monetary base*) and *Contra-entry to currency issue—central government* (a component of *Other Items (net)*).
- *Liabilities to IMF—central government* (a component of *Liabilities to nonresidents*) and *Contra-entry to liabilities to IMF—central government* (a component of *Other Items (net)*).
- *Reserve assets—central government* (a component of *Claims on nonresidents*) and *Contra-entry to reserve assets—central government* (a component of *Other Items (net)*).

## Reporting to the IMF

**7.58** The standardized report forms (SRFs) for monetary data reporting to the IMF, introduced in 2004, are presented in Appendix II of this *Guide*, together with *Guidelines for Completion of Standardized Report Forms 1SR, 2SR, 4SR, and 5SR for Reporting Monetary Data to the Fund*. The forms are:<sup>20</sup>

- *Form 1SR – Central Bank;*
- *Form 2SR – Other Depository Corporations;*
- *Form 4SR – Other Financial Corporations;* and
- *Form 5SR – Monetary Aggregates*

<sup>19</sup>In earlier presentations of the monetary authorities account, the contra-entries to the liability entries for central government issuance of currency and central government indebtedness to the IMF were indistinguishably included in the line item for central bank claims on central government, and the contra-entry for central government holdings of international reserves was indistinguishably included in the line item for central government deposits in the central bank.

<sup>20</sup>The SRFs are applicable to data reporting by each country that reports monetary data directly to the IMF. A more detailed reporting format is used for monetary-union-member countries that report their monetary data to a monetary-union headquarters that transmits each union-member country's data to the IMF. The reporting formats for these countries are consistent with the SRF format but contain additional line items to account for a dichotomy of nonresident classifications—within-union nonresidents and outside-union nonresidents—in the data for a union-member country.



**7.59** Forms 1SR, 2SR, and 4SR are based on the sectoral balance sheets of the central bank, ODCs, and OFCs, respectively, but contain additional line items for data disaggregation by national/foreign currency of denomination.<sup>21</sup> In the sectoral balance sheet in Table 7.1 of the *MFSM* (pp. 80–86), the asset accounts for securities other than shares, shares and other equity, insurance technical reserves, financial derivatives, and other accounts receivable are not disaggregated by national/foreign currency of denomination; similarly, the liability accounts for loans, insurance technical reserves, financial derivatives, and other accounts payable are not disaggregated by currency of denomination. The additional lines in Forms 1SR, 2SR, and 4SR are intended for use by countries for which more categories of financial asset and liability reporting by currency of denomination are feasible.

**7.60** *Form 1SR—Central Bank* contains lines to be used to distinguish a central bank's holdings of foreign assets that qualify as official international reserves. In the *MFSM* framework, the central bank's claims on nonresidents are classified by foreign asset—monetary gold and SDR holdings, foreign currency, deposits, securities other than shares, loans, etc.—without separately identifying the foreign assets that are included in international reserves. In the earlier framework of the monetary statistics, international reserve assets constituted a separate category of foreign assets in the central bank data reported to the IMF.

**7.61** The *International Reserves and Foreign Currency Liquidity: Guidelines for a Data Template* (see Kester, 2001) has been introduced as the main conduit for countries' reporting of their international reserve assets and foreign currency liabilities. Many countries have not yet implemented such reporting on a regular and timely basis, but are expected to adopt such reporting in the future.<sup>22</sup> In the interim, central bank holdings of international reserves are to be reported in the lines provided in Form 1SR.

**7.62** *Reserve position in the Fund*—a component of international reserves—measures a country's wherewithal for meeting balance of payments needs

<sup>21</sup>Form 5SR is described in Chapter 6, which covers issues that pertain to monetary aggregates.

<sup>22</sup>Reporting of international reserves in conformity with the template is required only for subscribers to the IMF's Special Data Dissemination Standard (SDDS) (see ¶7.68–7.69, below).

through the drawing down of a country's unconditional claims on the IMF. The Form 1SR line item for *Reserve position in the Fund* is a legacy of a longstanding practice of presenting a country's financial relationship with the IMF on a net basis. Some countries still use this presentation in the reporting of central bank data to the IMF. In completing Form 1SR, the data entries appear either in the individual accounts—*IMF Quota* and *IMF Account No. 1 & Securities*—or on a net basis in *Reserve position in the Fund*, thereby avoiding double-counting.

**7.63** *Reserve position in the Fund* can be calculated by using an algebraic relationship between a country's claims on and liabilities to the IMF. *Reserve position in the Fund* is equal to *IMF Quota* (a foreign asset of the central bank) minus the balances in the *IMF No. 1 Account* (a foreign liability of the central bank) that are *not subject to exclusion*<sup>23</sup> plus *Loans to the IMF* (applicable to few countries).

**7.64** In accordance with the methodology in the *MFSM* and this *Guide*, the country's quota subscription is recorded in *IMF Quota* (within *Other accounts receivable—other*) in Form 1SR, and the deposit liability to the IMF is recorded in *IMF Accounts No. 1 & Securities* (within *Deposits excluded from monetary base—Transferable Deposits*<sup>24</sup>). Form 1SR also includes a line for *Reserve position in the Fund* (within *Holdings of Foreign Currency*) for use by countries not yet reporting their quota subscriptions and deposit liabilities to the IMF on a gross basis.

**7.65** The SRFs are applicable to data reporting by each country that reports monetary data directly to the IMF. A more detailed reporting format is used for countries that report their monetary data to the European Central Bank (ECB), which transmits the data

<sup>23</sup>*IMF No. 1 Account balances not subject to exclusion* is a deposit liability to the Fund, which is used to cover part of the country's IMF quota subscription. *IMF No. 1 Account balances subject to exclusion* is a deposit liability that is the contra-entry to a country's use of IMF resources (that is, purchase of another country's currency) through the IMF's General Resource Account within the IMF's Finance Department. Suppose a country that did not lend to the IMF had a *Quota subscription (Q)* of 120 and an *IMF No. 1 Account (NI)* balance of 160, including a balance *subject to exclusion (E)* in the amount of 50. *Reserve position in the Fund (RPF)* would be equal to 10, calculated as  $RPF = Q - (NI - E) = 120 - (160 - 50) = 120 - 110 = 10$ .

<sup>24</sup>Securities, immediately encashable by the IMF, sometimes are substituted for deposits in the *IMF No. 1 Account*. As indicated in Chapter 4, these securities are classified as transferable deposits.

to the IMF.<sup>25</sup> The reporting formats for these countries are generally consistent with the SRFs but contain additional line items to account for a dichotomy of nonresident classification—in-union nonresidents and outside-union nonresidents—in the data. Statistics are compiled on the basis of both national residency and euro-area-wide residency, based on EU membership as of a specified date.<sup>26</sup>

**7.66** Using the euro-area-wide residency criteria, all institutional units located in euro-area countries are treated as resident, and all units outside the euro area as nonresident. For example, claims on government under the national residency criteria include only claims on the government of the country, whereas claims on government under the euro-area-wide residency criteria include claims on the governments of all euro-area countries. Under the euro-area-wide residency criteria, the ECB is a resident unit, whereas under the national residency criteria, the ECB is treated as a foreign unit for all countries. Under ECB statistical reporting requirements—concerning the consolidated balance sheet of the monetary financial institutions sector—the ECB is to be classified as a resident of the country in which it is physically located (Germany).

## Data Dissemination

### National Data Release and Publication

**7.67** Most countries have longstanding practices of national dissemination of their monetary statistics through press releases, central bank bulletins and/or other national publications, and through reporting of monetary data for country presentations (called *country pages*) in the IMF's *IFS* and for analytical use within the IMF.<sup>27</sup> In the Internet age, a number of countries have established the dissemination of

their monetary and other macroeconomic statistics through national websites.

**7.68** Links to summary monetary data at national websites are shown on the Dissemination Standards Bulletin Board (DSBB) at the IMF's external website ([www.imf.org](http://www.imf.org)). Posting of these summary monetary data (and other macroeconomic indicators) is a requirement for countries that subscribe to the Special Data Dissemination Standard (SDDS). Established by the IMF in 1996, the SDDS is designed to inform international capital markets about countries whose data coverage, periodicity, timeliness, and transparency practices meet international standards.<sup>28</sup>

**7.69** Established by the IMF in 1997, the General Data Dissemination System (GDDS) is a developmental framework wherein countries work to improve the comprehensiveness and reliability of their macroeconomic statistics as a step toward meeting the SDDS requirements. SDDS subscription and GDDS participation are voluntary, but a country must observe all SDDS requirements to maintain an SDDS subscription.<sup>29</sup>

**7.70** Further impetus for adherence to international standards for the monetary statistics has been fostered by the global availability and high visibility of countries' monetary statistics through access to Internet sites. The means for implementing the international standards are provided by using the *MFSM* and this *Guide*, the SDDS or GDDS framework, and the standardized report forms and accompanying guidelines for submission of monetary statistics to the IMF (see ¶7.58–7.64, above). Adoption of the international standards is also facilitated by features of the DDSB, wherein each SDDS subscriber or GDDS participant presents *metadata*—descriptions of the methodology for a country's monetary and other macroeconomic statistics. Compilers at the national level and IMF staff members work closely on development of the metadata. For the monetary and financial statistics, this work centers on implementation and documentation of methodology that is based on the *MFSM* and this *Guide*.

<sup>25</sup>The countries include those that belong to the European Economic and Monetary Union (EMU: the euro area), a number of other members of the EU, and other European countries that have adopted the ECB's framework.

<sup>26</sup>The *IFS* page for each euro-area country contains monetary statistics on both national and euro-area-wide residency bases. *IFS* also includes a euro-area page, which shows the monetary data consolidated for the Eurosystem. The *Introduction* (see pp. xvi–xix) in the monthly issue of *IFS* contains information on the creation of the Eurosystem, euro banknotes and coins, the euro clearing system (*TARGET*), and the euro-area data in *IFS*.

<sup>27</sup>Euro-area countries transmit their monetary and financial statistics to the ECB, which consolidates the data across EMU member countries. The consolidated data are disseminated in ECB releases, its *Monthly Bulletin*, and other Eurosystem publications.

<sup>28</sup>See IMF (2007a). Information on the DSBB and SDDS is also available at <http://dsbb.imf.org/Applications/web/dsbbhome/>.

<sup>29</sup>As of December 2007, 64 of the 185 member countries of the IMF were SDDS subscribers, and 90 member countries were GDDS participants. Each SDDS subscriber is required to establish summary country data to be hyperlinked to the DDSB. For information on the GDDS, see IMF (2007b).

### International Financial Statistics

**7.71** The presentation of the monetary data in the *IFS* country pages is being revised in parallel with the implementation of the *MFSM* methodology and the adoption of standardized data reporting by the countries. Each country page will include sections for *Central Bank*, *Other Depository Corporations*, and *Depository Corporations*, presenting data in the format of the *CBS*, *ODCS* and *DCS*, respectively. Sections for *Other Financial Corporations* and *Financial Corporations Survey* also will be included for those countries in which the reporting of OFC data has been established. The country page will also have a *Monetary Aggregates* section to present data for broad money (for example, M3) and its components, lower-ordered monetary aggregates (for example, M1 and M2), and broad money on a seasonally adjusted basis.<sup>30</sup>

**7.72** The *Central Bank* section of the country page will replace the *Monetary Authorities* section in which the central government's currency issue, indebtedness to the IMF, and international reserve holdings (in countries where applicable) were included in the presentation.<sup>31</sup> The *Other Depository Corporations* section was previously captioned as *Banking Institutions*, and *Depository Corporations Survey* was formerly shown as *Banking Survey*.<sup>32</sup>

**7.73** Introduction of the revised presentation of the *IFS* country pages cannot be accomplished in one step, because of inability of all countries to implement introduction of the SRFs and associated reporting to the IMF as of a single date. Therefore, the country pages in *IFS* still contain the unrevised presentation for countries. During the transition period, the monetary data for countries that already are reporting SRF data on a monthly basis are shown in the revised presentation in country pages of the quarterly *Supple-*

<sup>30</sup>The monetary aggregates are covered in Chapter 6 of this *Guide*.

<sup>31</sup>The *Monetary authorities account* is explained in ¶7.55–7.57 and is illustrated in Annex 7.4. After adoption of the new presentation, *IFS* users still will have access to data on the central government's indebtedness to the IMF and international reserve holdings (in the *Liquidity* section of the *IFS* page), as well as data on government currency issue (in the *Monetary Aggregates* section).

<sup>32</sup>*IFS* presentations for some countries contain sections for *Deposit Money Banks*—only those ODCs that issued transferable deposits—and *Monetary Survey*, which consolidates the data for the *Monetary Authorities* and *Deposit Money Banks* accounts. These presentations will be discontinued after a country commences reporting for all ODCs in the standardized form (Form 2SR).

*ment to International Financial Statistics*. Country pages for these countries continue to appear also in the unrevised form in *IFS*. The revised presentation will be introduced in *IFS*, when all countries with country pages have established the reporting of SRF data.

### Supplementary Data

**7.74** An illustrative set of disaggregated data for sectoral-balance-sheet accounts of the central bank, ODCs, and OFCs is shown in Table 7.14 in Annex 7.5.<sup>33</sup> Some dimensions of data disaggregation are presented in the *MFSM* (Box 7.1, p. 76). The categories in Table 7.14 were parsimoniously chosen to represent the basic types of supplementary data that are of analytical interest for the FCs sectors in most or all countries. As indicated in the *MFSM* (¶391), other categories of supplementary data may be of interest in a particular country. This *Guide* recommends that *the supplementary data should be compiled for end-of-period stocks, recognizing that, at a later stage, some countries may wish to compile flow data for the supplementary categories*.

**7.75** In Table 7.14, the major dimensions of disaggregation of financial assets and liabilities in the form of securities other than shares and loans are:

- *Term to maturity*. Short term or long term.
- *Currency of denomination*. National currency or foreign currency.
- *Interest rate*. Fixed rate or variable rate.

**7.76** For analyzing the liquidity of deposit liabilities, the data on short- and long-term deposits complement the disaggregated data in the sectoral balance sheets, where deposits in the central bank and ODCs are divided into *Deposits included in broad money* (further disaggregated by transferable/other deposits) and *Deposits excluded from broad money*. Similarly, the liability data for securities other than shares, which are disaggregated by maturity in Table 7.14, complement the sectoral-balance-sheet data that are classified as *Securities other than shares, Included in broad money* and *Securities other than shares, Excluded from broad money*.

<sup>33</sup>Table 7.14 is subtitled as *Supplements to Forms 1SR, 2SR, and 4SR*. At present, the supplementary data are not reported to the IMF. If reported in the future, the supplementary data would be provided, at quarterly (or annual) intervals, along with the Forms 1SR, 2SR, and 4SR submitted for the same reporting date.

7.77 In Table 7.14, financial derivatives are divided into separate categories for forward contracts (disaggregated by type of contract), call options, and put options. No category is shown for futures contracts, given that futures contracts are settled on a daily basis and therefore do not have outstanding balances (nonzero stock positions). Off-balance-sheet data for notional principal of financial futures and swap-type forward contracts are shown as memorandum items in Table 7.14 in Annex 7.5. Data on notional principal contracts are important for analysis of activity in these financial derivatives, given the absence of stock data for futures contracts and the presence of potentially misleading stock data for swap-type forward contracts.<sup>34</sup>

## Annex 7.1. Other Changes in the Volume of Assets (OCVA)

### Introduction

7.78 Tables 7.1–7.3 show examples of OCVA entries in the sectoral balance sheets for the central bank, ODCs, and OFCs. For illustrative purposes, the OCVA are arranged in separate columns for changes in the classification of assets/liabilities (column A), sectoral reclassification (column B), loan write-offs and provisions for loan losses (column C), and other types of OCVA (column D).

### Examples for the Central Bank

7.79 Examples of OCVA entries and contra-entries in the sectoral balance sheet of the central bank are shown in Table 7.1. These are:

- *Monetization of commodity gold* is recorded in *Changes in the classification of assets* (column A) as a decrease in *Nonfinancial assets* (–3) and an increase in *Monetary gold* (+3).
- *Loan write-offs* are recorded in column C as reductions in *loans to public nonfinancial corporations* (–5), *Other nonfinancial corporations* (–3), and *Other resident sectors* (–2) with a corresponding

reduction in provisions in the *Resident-sector* category of *Other accounts payable—Other* (–10), given that these loans previously were provisioned in full.

- *OFC reclassified as an ODC* is recorded in column B as (i) a decrease in *Claims in financial derivatives* on OFCs (–2) with a corresponding increase in *Claims in financial derivatives* on the ODCs (+2); (ii) a decrease in *Transferable deposits in foreign currency* of the OFCs, which were included in broad money (–3) with a corresponding increase in *Transferable deposits in foreign currency* of the ODCs, which are excluded from broad money (+3); and (iii) a decrease in *Financial-derivatives liabilities* to the OFCs (–2) with a corresponding increase in *Financial-derivatives liabilities* to the ODCs (+2).
- *Catastrophic loss of nonfinancial assets* is recorded in column D as a decrease in *Nonfinancial assets* (–4) with a corresponding decrease in *Retained earnings* (–4).
- *Appropriation of retained earnings to general and special reserves* is recorded in column D as a decrease in *Retained earnings* (–9) and an increase in *General and special reserves* (+9).

### Examples for Other Depository Corporations

7.80 Examples of OCVA entries and contra-entries in the sectoral balance sheet of the ODCs are shown in Table 7.2. These are:

- *OFC reclassified as an ODC* is recorded in column B as an increase in *Total assets* (+85) and an increase in *Total liabilities* (+85). This reclassification resulted in an increase in ODC asset holdings in the following categories: *Currency* (+5), *Transferable deposits* (+13), *Other deposits* (+6), *Securities other than shares* (+18), *Loans* (+28), *Shares and other equity* (+4), *Financial derivatives* (+4), *Other accounts receivable* (+5), and *Nonfinancial assets* (+2). This reclassification led to increases in ODC liabilities in the following categories: *Securities other than shares, included in broad money* (+16), *Securities other than shares, excluded from broad money* (+10), *Loans* (+3), *Financial derivatives* (+7), *Other accounts payable* (+3), and *Shares and other equity* (+46).
- *Loans reclassified as securities* is recorded in column A as a decrease of *Loans* to other nonfinancial corporations (–10) and an increase in *Securities other than shares* issued by other nonfinancial corporations (+10).

<sup>34</sup>Periodic swap payments between a party and counterparty to these contracts create volatility in the outstanding amounts over the life of the swap contracts (see Chapter 5, ¶5.247–5.263). Flow data for futures and swap contracts are included in the total flows for financial derivatives in the framework of the sectoral balance sheets, but are not disaggregated into separate flow categories for futures and swap contracts. The memorandum items for notional principal of futures and swap contracts partially fill the gap by providing data for estimating the expected flows for these contracts.

Table 7.1. OCVA: Central Bank

	(A) Changes in Class. of Assets	(B) Sectoral Reclassi- fication	(C) Write- offs	(D) Other	Other Changes in Volume: Total	Comments
<b>Assets</b>						
<b>Monetary gold and SDRs</b>	<b>3</b>				<b>3</b>	
Monetary gold	3				3	Commodity gold that was monetized.
<b>Loans</b>			<b>-10</b>		<b>-10</b>	
Public nonfinancial corporations			-5		-5	Write-offs of loans.
Other nonfinancial corporations			-3		-3	Write-offs of loans.
Other resident sectors			-2		-2	Write-offs of loans.
<b>Financial derivatives</b>		<b>0</b>			<b>0</b>	
Other depository corporations		2			2	OFCs reclassified as ODCs.
Other financial corporations		-2			-2	OFCs reclassified as ODCs.
<b>Nonfinancial assets</b>	<b>-3</b>			<b>-4</b>	<b>-7</b>	Commodity gold monetized (-3). Catastrophic loss (-4).
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>-10</b>	<b>-4</b>	<b>-14</b>	
<b>Liabilities</b>						
<b>Currency in circulation</b>						
<b>Deposits included in broad money</b>		<b>-3</b>			<b>-3</b>	
<b>Transferable deposits</b>		<b>-3</b>			<b>-3</b>	
In foreign currency		-3			-3	
Other financial corporations		-3			-3	OFCs reclassified as ODCs.
<b>Deposits excluded from broad money</b>		<b>3</b>			<b>3</b>	
<b>Transferable deposits</b>		<b>3</b>			<b>3</b>	
In foreign currency		3			3	
Other depository corporations		3			3	OFCs reclassified as ODCs (3).
<b>Financial derivatives</b>		<b>0</b>			<b>0</b>	
Other depository corporations		2			2	OFCs reclassified as ODCs.
Other financial corporations		-2			-2	OFCs reclassified as ODCs.
<b>Other accounts payable</b>			<b>-10</b>		<b>-10</b>	
<b>Other</b>			<b>-10</b>		<b>-10</b>	
Resident sectors			-10		-10	Write-offs of loans that were previously fully provisioned (-10).
<b>Shares and other equity</b>				<b>-4</b>	<b>-4</b>	
Retained earnings				-13	-13	Catastrophic loss of nonfinancial assets (-4). Reclassification of retained earnings as an appropriation to reserves (-9).
General and special reserves				9	9	Reclassification of retained earnings as an appropriation to reserves (9).
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>-10</b>	<b>-4</b>	<b>-14</b>	
<b>Vertical Check</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

- *Corporate repos newly included in broad money* is recorded in column A as a decrease of *Loans* from other nonfinancial corporations (-7) and an increase in *Transferable deposits in national cur-*

*rency* held by other nonfinancial corporations and included in broad money (+7).

- *The change in the definition of broad money* is recorded in column A as a decrease in *Securities*

Table 7.2. OCVA: Other Depository Corporations

	(A) Changes in Class. of Assets	(B) Sectoral Reclassi- fication	(C) Write- offs	(D) Other	Other Changes in Volume: Total	Comments
<b>Assets</b>						
<b>Currency and deposits</b>		<b>24</b>			<b>24</b>	
Currency		5			5	
National		2			2	OFCs reclassified as ODCs.
Foreign		3			3	OFCs reclassified as ODCs.
Transferable deposits		13			13	
In national currency		11			11	
Central bank		1			1	OFCs reclassified as ODCs.
Other depository corporations		10			10	OFCs reclassified as ODCs.
In foreign currency		2			2	
Central bank		1			1	OFCs reclassified as ODCs.
Other depository corporations		1			1	OFCs reclassified as ODCs.
Other deposits		6			6	
In national currency		3			3	
Central bank		2			2	OFCs reclassified as ODCs.
Other depository corporations		1			1	OFCs reclassified as ODCs.
In foreign currency		3			3	
Other depository corporations		3			3	OFCs reclassified as ODCs.
<b>Securities other than shares</b>	<b>10</b>	<b>18</b>			<b>28</b>	
Other depository corporations		2			2	OFCs reclassified as ODCs.
Other financial corporations		1			1	OFCs reclassified as ODCs.
Central government		6			6	OFCs reclassified as ODCs.
State and local government		2			2	OFCs reclassified as ODCs.
Public nonfinancial corporations		3			3	OFCs reclassified as ODCs.
Other nonfinancial corporations	10	4			14	Loans reclassified as securities (10). OFCs reclassified as ODCs (4).
<b>Loans</b>	<b>-10</b>	<b>28</b>	<b>-541</b>		<b>-523</b>	
Public nonfinancial corporations		17	-71		-54	OFCs reclassified as ODCs (17). Write-offs of loans (-71).
Other nonfinancial corporations	-10	5	-291		-296	Loans reclassified as securities (-10). OFCs reclassified as ODCs (5). Write-offs of loans (-291).
Other resident sectors		4	-179		-175	OFCs reclassified as ODCs (4). Write-offs of loans (-179).
Nonresidents		2			2	OFCs reclassified as ODCs.
<b>Shares and other equity</b>		<b>4</b>			<b>4</b>	
Other nonfinancial corporations		1			1	OFCs reclassified as ODCs.
Nonresidents		3			3	OFCs reclassified as ODCs.
<b>Financial derivatives</b>		<b>4</b>			<b>4</b>	
Other depository corporations		2			2	OFCs reclassified as ODCs.
Nonresidents		2			2	OFCs reclassified as ODCs.
<b>Other accounts receivable</b>		<b>5</b>			<b>5</b>	
<b>Trade credit and advances</b>		<b>3</b>			<b>3</b>	
Other financial corporations		1			1	OFCs reclassified as ODCs.
Other nonfinancial corporations		2			2	OFCs reclassified as ODCs.
<b>Other</b>		<b>2</b>			<b>2</b>	
Nonresidents		2			2	OFCs reclassified as ODCs.
<b>Nonfinancial assets</b>		<b>2</b>		<b>-5</b>	<b>-3</b>	OFCs reclassified as ODCs (2). Catastrophic loss (-5).
<b>TOTAL</b>	<b>0</b>	<b>85</b>	<b>-541</b>	<b>-5</b>	<b>-461</b>	

Table 7.2 (concluded)

	(A) Changes in Class. of Assets	(B) Sectoral Reclassi- fication	(C) Write- offs	(D) Other	Other Changes in Volume: Total	Comments
<b>Liabilities</b>						
<b>Deposits included in broad money</b>	<b>7</b>				<b>7</b>	
<b>Transferable deposits</b>	<b>7</b>				<b>7</b>	
In national currency	7				7	
Other nonfinancial corporations	7				7	Corp. repos newly included in broad money.
<b>Securities other than shares, included in broad money</b>	<b>1</b>	<b>16</b>			<b>17</b>	
In national currency	1	16			17	
Other nonfinancial corporations	1				1	Change in the definition of broad money.
Other resident sectors		16			16	OFCs reclassified as ODCs.
<b>Securities other than shares, excluded from broad money</b>	<b>-1</b>	<b>10</b>			<b>9</b>	
In national currency	-1	9			8	
Other financial corporations		2			2	OFCs reclassified as ODCs.
Public nonfinancial corporations		1			1	OFCs reclassified as ODCs.
Other nonfinancial corporations	-1	3			2	Change in the definition of broad money (-1). OFCs reclassified as ODCs (3).
Nonresidents		3			3	OFCs reclassified as ODCs.
In foreign currency		1			1	OFCs reclassified as ODCs.
Other nonfinancial corporations		1			1	OFCs reclassified as ODCs.
<b>Loans</b>	<b>-7</b>	<b>3</b>			<b>-4</b>	
Central government		1			1	OFCs reclassified as ODCs.
Other nonfinancial corporations	-7				-7	Corp. repos newly included in broad money (-7).
Nonresidents		2			2	OFCs reclassified as ODCs.
<b>Financial derivatives</b>		<b>7</b>			<b>7</b>	
Central bank		2			2	OFCs reclassified as ODCs.
Other depository corporations		2			2	OFCs reclassified as ODCs.
Public nonfinancial corporations		2			2	OFCs reclassified as ODCs.
Nonresidents		1			1	OFCs reclassified as ODCs.
<b>Other accounts payable</b>		<b>3</b>	<b>-541</b>	<b>0</b>	<b>-538</b>	
<b>Trade credit and advances</b>		<b>3</b>			<b>3</b>	
Public nonfinancial corporations		1			1	OFCs reclassified as ODCs.
Other nonfinancial corporations		2			2	OFCs reclassified as ODCs.
<b>Other</b>			<b>-541</b>		<b>-541</b>	
Other resident sectors			-541		-541	Write-offs of loans that were previously fully provisioned (-541).
<b>Shares and other equity</b>		<b>46</b>		<b>-5</b>	<b>41</b>	
Funds contributed by owners		24			24	OFCs reclassified as ODCs.
Retained earnings		12		-17	-5	OFCs reclassified as ODCs (12). Catastrophic loss of nonfinancial assets (-5). Reclassification of retained earnings as an appropriation to reserves (-12).
General and special reserves		10		12	22	OFCs reclassified as ODCs (10). Reclassification of retained earnings as an appropriation to reserves (12).
<b>TOTAL</b>	<b>0</b>	<b>85</b>	<b>-541</b>	<b>-5</b>	<b>-461</b>	
<b>Vertical check</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

Table 7.3. OCVA: Other Financial Corporations

	(A) Changes in Class. of Assets	(B) Sectoral Reclassi- fication	(C) Write- offs	(D) Other	Other Changes in Volume: Total	Comments
<b>Assets</b>						
<b>Currency and deposits</b>		<b>-24</b>			<b>-24</b>	
Currency		-5			-5	
National		-2			-2	OFCs reclassified as ODCs.
Foreign		-3			-3	OFCs reclassified as ODCs.
Transferable deposits		-13			-13	
In national currency		-11			-11	
Central bank		-1			-1	OFCs reclassified as ODCs.
Other depository corporations		-10			-10	OFCs reclassified as ODCs.
In foreign currency		-2			-2	
Central bank		-1			-1	OFCs reclassified as ODCs.
Other depository corporations		-1			-1	OFCs reclassified as ODCs.
Other deposits		-6			-6	
In national currency		-3			-3	
Central bank		-2			-2	OFCs reclassified as ODCs.
Other depository corporations		-1			-1	OFCs reclassified as ODCs.
In foreign currency		-3			-3	OFCs reclassified as ODCs.
Other depository corporations		-3			-3	OFCs reclassified as ODCs.
<b>Securities other than shares</b>	<b>-2</b>	<b>-18</b>	<b>-3</b>		<b>-23</b>	
Other depository corporations		-2			-2	OFCs reclassified as ODCs.
Other financial corporations		-1			-1	OFCs reclassified as ODCs.
Central government		-6			-6	OFCs reclassified as ODCs.
State and local government		-2			-2	OFCs reclassified as ODCs.
Public nonfinancial corporations		-3			-3	OFCs reclassified as ODCs.
Other nonfinancial corporations	-2	-4			-6	Securities converted into shares (-2). OFCs reclassified as ODCs (-4).
Nonresidents			-3		-3	Write-offs of securities.
<b>Loans</b>		<b>-28</b>	<b>-48</b>		<b>-76</b>	
Public nonfinancial corporations		-17	-13		-30	OFCs reclassified as ODCs (-17). Write-offs of loans (-13).
Other nonfinancial corporations		-5	-20		-25	OFCs reclassified as ODCs (-5). Write-offs of loans (-20).
Other resident sectors		-4	-15		-19	OFCs reclassified as ODCs (-4). Write-offs of loans (-15).
Nonresidents		-2			-2	OFCs reclassified as ODCs (-2).
<b>Shares and other equity</b>	<b>2</b>	<b>-4</b>			<b>-2</b>	
Other nonfinancial corporations	2	-1			1	Securities converted into shares (2). OFCs reclassified as ODCs (-1).
Nonresidents		-3			-3	OFCs reclassified as ODCs.
<b>Financial derivatives</b>		<b>-4</b>			<b>-4</b>	
Other depository corporations		-2			-2	OFCs reclassified as ODCs.
Nonresidents		-2			-2	OFCs reclassified as ODCs.
<b>Other accounts receivable</b>		<b>-5</b>			<b>-5</b>	
<b>Trade credit and advances</b>		<b>-3</b>			<b>-3</b>	
Other financial corporations		-1			-1	OFCs reclassified as ODCs.
Other nonfinancial corporations		-2			-2	OFCs reclassified as ODCs.
<b>Other</b>		<b>-2</b>			<b>-2</b>	
Nonresidents		-2			-2	OFCs reclassified as ODCs.
<b>Nonfinancial assets</b>		<b>-2</b>			<b>-2</b>	OFCs reclassified as ODCs.
<b>TOTAL</b>	<b>0</b>	<b>-85</b>	<b>-51</b>	<b>0</b>	<b>-136</b>	
<b>Vertical Check: Assets–Liabilities</b>						



Table 7.3 (concluded)

	(A) Changes in Class. of Assets	(B) Sectoral Reclasi- fication	(C) Write- offs	(D) Other	Other Changes in Volume: Total	Comments
<b>Liabilities</b>						
<b>Securities other than shares, excluded from broad money</b>		<b>-26</b>			<b>-26</b>	
In national currency		-25			-25	
Other financial corporations		-2			-2	OFCs reclassified as ODCs.
Public nonfinancial corporations		-1			-1	OFCs reclassified as ODCs.
Other nonfinancial corporations		-3			-3	OFCs reclassified as ODCs.
Other resident sectors		-16			-16	OFCs reclassified as ODCs.
Nonresidents		-3			-3	OFCs reclassified as ODCs.
In foreign currency		-1			-1	OFCs reclassified as ODCs.
Other nonfinancial corporations		-1			-1	OFCs reclassified as ODCs.
<b>Loans</b>		<b>-3</b>			<b>-3</b>	
Central government		-1			-1	OFCs reclassified as ODCs.
Nonresidents		-2			-2	OFCs reclassified as ODCs.
<b>Financial derivatives</b>		<b>-7</b>			<b>-7</b>	
Central bank		-2			-2	OFCs reclassified as ODCs.
Other financial corporations		-2			-2	OFCs reclassified as ODCs.
Public nonfinancial corporations		-2			-2	OFCs reclassified as ODCs.
Nonresidents		-1			-1	OFCs reclassified as ODCs.
<b>Other accounts payable</b>		<b>-3</b>	<b>-48</b>		<b>-51</b>	
<b>Trade credit and advances</b>		<b>-3</b>			<b>-3</b>	
Public nonfinancial corporations		-1			-1	OFCs reclassified as ODCs.
Other nonfinancial corporations		-2			-2	OFCs reclassified as ODCs.
<b>Other</b>			<b>-48</b>		<b>-48</b>	
Other resident sectors			-48		-48	Write-offs of loans that were previously fully provisioned (-48).
<b>Shares and other equity</b>		<b>-46</b>	<b>-3</b>	<b>0</b>	<b>-49</b>	
Funds contributed by owners		-24			-24	OFCs reclassified as ODCs.
Retained earnings		-12	-3	-12	-27	OFCs reclassified as ODCs (-12). Write-offs of securities (-3). Reclassification of retained earnings as an appropriation to reserves (-12).
General and special reserves		-10		12	2	OFCs reclassified as ODCs (-10). Reclassification of retained earnings as an appropriation to reserves (12).
<b>TOTAL</b>	<b>0</b>	<b>-85</b>	<b>-51</b>	<b>0</b>	<b>-136</b>	
<b>Vertical check</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

- other than shares in national currency held by other nonfinancial corporations and excluded from broad money (-1) and an increase in *Securities other than shares* in national currency held by other nonfinancial corporations and included in broad money (+1).
- *Loan write-offs* are recorded in column C as a decrease in *Loans* to public nonfinancial corporations (-71), other nonfinancial corporations

(-291), and other resident sectors (-179) with a corresponding decrease in *Provisions* within the resident-sectors category of *Other accounts payable—other* (-541), given that these loans were previously provisioned in full.

- *Catastrophic loss of nonfinancial assets* is recorded in column D as a decrease in *Nonfinancial assets* (-5) and a decrease in *Retained earnings* (-5).

- *Appropriation of retained earnings to general and special reserves* is recorded in column D as a decrease in *Retained earnings* (–12) and an increase in *General and special reserves* (+12).

### Examples for Other Financial Corporations

**7.81** Examples of OCVA entries and contra-entries in the sectoral balance sheet of the OFCs are shown in Table 7.3:

- *OFC reclassified as an ODC* is shown in column B as a decrease in total assets (–85) and a decrease in total liabilities (–85). This reclassification resulted in an decrease in OFC asset holdings in the following categories: *Currency* (–5), *Transferable deposits* (–13), *Other deposits* (–6), *Securities other than shares* (–18), *Loans* (–28), *Shares and other equity* (–4), *Financial derivatives* (–4), *Other accounts receivable* (–5), and *Nonfinancial assets* (–2). This reclassification led to decreases in OFC liabilities in the following categories: *Securities other than shares, excluded from broad money* (–26), *Loans* (–3), *Financial derivatives* (–7), *Other accounts payable* (–3), and *Shares and other equity* (–46).
- *Securities converted into shares* is recorded in column A as a decrease in *Securities other than shares* of other nonfinancial corporations (–2) and an increase in *Shares and other equity* of other nonfinancial corporations (+2).
- *Loan write-offs* is recorded in column C as a decrease in *Loans* to public nonfinancial corporations (–13), other nonfinancial corporations (–20), and other resident sectors (–15) and a decrease in *provisions* in the resident-sector category of *Other accounts payable—Other* (–48), given that these loans previously were provisioned in full.
- *Write-offs of securities* is recorded in column C as a decrease in *Securities other than shares* of non-residents (–3) and a direct reduction in *Retained earnings* (–3), given that a provision for loss on these securities had not been made.
- *Appropriation of retained earnings to general and special reserves* is recorded in column D as a decrease in *Retained earnings* (–12) and an increase in *General and special reserves* (+12).

### Annex 7.2. Consolidation Adjustments

**7.82** This annex comprises Table 7.4, Consolidation Adjustment: *Other Depository Corporations Sur-*

*vey*; Table 7.5, Consolidation Adjustment: *Depository Corporations Survey*; Table 7.6, Consolidation Adjustment: *Other Financial Corporations Survey*; and Table 7.7, Consolidation Adjustment: *Financial Corporations Survey*.

### Annex 7.3. Surveys of the Financial Corporations Sector

**7.83** This annex comprises Table 7.8, *Central Bank Survey*; Table 7.9, *Other Depository Corporations Survey*; Table 7.10, *Other Financial Corporations Survey*; Table 7.11, *Depository Corporations Survey*; and Table 7.12, *Financial Corporations Survey*.

### Annex 7.4. Monetary Authorities Account

**7.84** This annex consists of Table 7.13, Monetary Authorities Account.

### Annex 7.5. Supplementary Data: Guidance Notes

#### Data Periodicity

**7.85** This *Guide* recommends that *the supplementary data should be compiled on a quarterly basis*.

#### Financial Instrument Coverage

**7.86** A single format for supplementary data for the central bank, ODCs, and OFCs is shown in Table 7.14. Most categories in Table 7.14 are applicable to each subsector of the FCs sector. Exceptions that apply to all countries are:

- *Assets: Securities issued by the central bank. This category is not applicable to the central bank, given that a central bank does not hold its own securities.*
- *Liabilities: Deposits included in broad money and Securities other than shares, included in broad money. These categories are not applicable to the OFCs, which do not issue liabilities included in broad money.*

**7.87** Some line items in Table 7.14 are not applicable to all countries. Some central banks do not issue *Deposits included in broad money* and/or *Securities other than shares*. If issued by a central bank, *Securities other than shares* may be eligible for pur-

chase by ODCs only. Even if purchasable by money-holding sectors, the central bank securities may be excluded from the country's national definition of broad money. The central bank, central governments, and/or other economic sectors in some countries do not issue foreign-currency-denominated *securities other than shares*. For OFCs, the liability category of *Deposits excluded from broad money* applies only in exceptional circumstances in which OFCs accept deposits (all of which, for any OFC, are excluded from broad money).

### Disaggregation by Maturity

**7.88** Only two maturity categories—short-term and long-term—are used for the supplementary data. Financial assets and liabilities with maturities of one year or less are defined as *short term*, and those with maturities of more than one year are defined as *long term*. It is recommended that *disaggregation by original or remaining maturity be based on national practice and/or data availability. Disaggregation by either original maturity or remaining maturity should be uniformly applied across the categories of financial assets and liabilities and across all FCs in a country.*

### Fixed- and Variable-Rate Loans and Securities Other Than Shares

**7.89** In Table 7.14, long-term loans are disaggregated into separate categories for fixed-rate and

variable-rate loans. Long-term *Securities other than shares* are disaggregated into (1) fixed-rate securities sold on a coupon basis, (2) variable-rate securities sold on a coupon basis, and (3) securities sold on a zero-coupon basis (an atypical category for long-term securities).

**7.90** Disaggregation of short-term loans or short-term securities into separate categories for fixed-rate and variable-rate instruments is deemed to be unnecessary. Variable rates are seldom applied to loans or securities having *original maturities* of less than one year. If maturity disaggregation is based on *remaining maturity*, all fixed- and variable-rate loans maturing within a year are indistinguishably included in the category of short-term loans. Similarly, all fixed- and variable-rate securities with remaining maturities of one year or less are included in the single category of short-term securities. Given the short term to maturity, the market risk arising from movements in the reference rate (for example, LIBOR, a prime rate for domestic loans, or a country-specific market rate) for the variable-rate loan or security is relatively small. Most contracts for variable-rate loans and securities specify that the interest rates are subject to annual or semiannual resetting or, at most, quarterly resetting. During the year just prior to maturity, loans and securities subject to annual resetting have fixed rates for the remaining term, and those subject to semiannual resetting have, at most, one remaining interest rate reset.

Table 7.4. Consolidation Adjustment: Other Depository Corporations Survey

	Opening Stock	Transactions	Valuation Changes	Other Changes in Volume	Closing Stock
<b>Liabilities (ODCs sectoral balance sheet)</b>	<b>439</b>	<b>41</b>	<b>58</b>	<b>2</b>	<b>540</b>
<b>Deposits excluded from broad money</b>	<b>274</b>	<b>29</b>	<b>6</b>	<b>0</b>	<b>309</b>
<b>Transferable deposits</b>	<b>251</b>	<b>22</b>	<b>5</b>	<b>0</b>	<b>278</b>
In national currency	216	14	0	0	230
Other depository corporations	216	14	0	0	230
In foreign currency	35	8	5	0	48
Other depository corporations	35	8	5	0	48
<b>Other deposits</b>	<b>23</b>	<b>7</b>	<b>1</b>	<b>0</b>	<b>31</b>
In national currency	15	-4	0	0	11
Other depository corporations	15	-4	0	0	11
In foreign currency	8	11	1	0	20
Other depository corporations	8	11	1	0	20
<b>Securities other than shares, excluded from broad money</b>	<b>90</b>	<b>12</b>	<b>18</b>	<b>0</b>	<b>120</b>
In national currency	35	2	5	0	42
Other depository corporations	35	2	5	0	42
In foreign currency	55	10	13	0	78
Other depository corporations	55	10	13	0	78
<b>Financial derivatives</b>	<b>45</b>	<b>-8</b>	<b>34</b>	<b>2</b>	<b>73</b>
Other depository corporations	45	-8	34	2	73
<b>Other accounts payable</b>	<b>30</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>38</b>
<b>Trade credit and advances</b>	<b>23</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>29</b>
Other depository corporations	23	6	0	0	29
<b>Other</b>	<b>7</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>9</b>
<b>Resident sectors</b>	<b>7</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>9</b>
<b>Settlements accounts</b>	<b>7</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>9</b>
Other depository corporations	7	2	0	0	9
<b>Minus:</b>					
<b>Assets (ODCs sectoral balance sheet)</b>	<b>426</b>	<b>-28</b>	<b>-3</b>	<b>19</b>	<b>414</b>
<b>Transferable deposits</b>	<b>243</b>	<b>-31</b>	<b>-1</b>	<b>11</b>	<b>222</b>
In national currency	214	-34	0	10	190
Other depository corporations	214	-34	0	10	190
In foreign currency	29	3	-1	1	32
Other depository corporations	29	3	-1	1	32
<b>Other deposits</b>	<b>23</b>	<b>3</b>	<b>0</b>	<b>4</b>	<b>30</b>
In national currency	15	5	0	1	21
Other depository corporations	15	5	0	1	21
In foreign currency	8	-2	0	3	9
Other depository corporations	8	-2	0	3	9
<b>Securities other than shares</b>	<b>85</b>	<b>4</b>	<b>0</b>	<b>2</b>	<b>91</b>
Other depository corporations	85	4	0	2	91
<b>Financial derivatives</b>	<b>45</b>	<b>-3</b>	<b>2</b>	<b>2</b>	<b>46</b>
Other depository corporations	45	-3	2	2	46
<b>Other accounts receivable</b>	<b>30</b>	<b>-1</b>	<b>-4</b>	<b>0</b>	<b>25</b>
<b>Trade credit and advances</b>	<b>23</b>	<b>-3</b>	<b>0</b>	<b>0</b>	<b>20</b>
Other depository corporations	23	-3	0	0	20
<b>Other</b>	<b>7</b>	<b>2</b>	<b>-4</b>	<b>0</b>	<b>5</b>
<b>Resident sectors</b>	<b>7</b>	<b>2</b>	<b>-4</b>	<b>0</b>	<b>5</b>
<b>Settlements accounts</b>	<b>7</b>	<b>2</b>	<b>-4</b>	<b>0</b>	<b>5</b>
Other depository corporations	7	2	-4	0	5
<b>Consolidation Adjustment: Liabilities-Assets</b>	<b>13</b>	<b>69</b>	<b>61</b>	<b>-17</b>	<b>126</b>

Table 7.5. Consolidation Adjustment: Depository Corporations Survey

	Opening Stock	Transactions	Valuation Changes	Other Changes in Volume	Closing Stock
<b>Liabilities to ODCs (CBS)</b>	<b>11,390</b>	<b>1,733</b>	<b>-220</b>	<b>5</b>	<b>12,908</b>
Reserve deposits (CBS)	10,979	1,604	-257	3	12,329
Other liabilities (CBS)	411	129	37	2	579
less:					
<b>Claims on CB (ODCS)</b>	<b>11,284</b>	<b>1,730</b>	<b>-208</b>	<b>4</b>	<b>12,810</b>
Reserve deposits (ODCS)	10,875	1,592	-246	2	12,223
Other claims (ODCS)	409	138	38	2	587
<b>Liabilities to ODCs (CBS record-ODC record)</b>	<b>106</b>	<b>3</b>	<b>-12</b>	<b>1</b>	<b>98</b>
<b>Liabilities to CB (ODCS)</b>	<b>1,599</b>	<b>28</b>	<b>13</b>	<b>2</b>	<b>1,642</b>
less:					
<b>Claims on other depository corporations (CBS)</b>	<b>1,658</b>	<b>-108</b>	<b>9</b>	<b>0</b>	<b>1,561</b>
<b>Liabilities to CB (ODC record-CB record)</b>	<b>-59</b>	<b>136</b>	<b>4</b>	<b>2</b>	<b>81</b>
<b>Total consolidation adjustment for CB and ODCs</b>	<b>47</b>	<b>139</b>	<b>-8</b>	<b>3</b>	<b>179</b>
<b>Consolidation adjustment for ODCs (ODCS)</b>	<b>13</b>	<b>69</b>	<b>61</b>	<b>-17</b>	<b>126</b>
<b>Total Consolidation Adjustment</b>	<b>60</b>	<b>208</b>	<b>53</b>	<b>-14</b>	<b>305</b>

Table 7.6. Consolidation Adjustment: Other Financial Corporations Survey

	Opening Stock	Transactions	Valuation Changes	Other Changes in Volume	Closing Stock
<b>Liabilities (OFCs sectoral balance sheet)</b>	<b>158</b>	<b>40</b>	<b>-10</b>	<b>-4</b>	<b>184</b>
<b>Securities other than shares, excluded from broad money</b>	<b>71</b>	<b>36</b>	<b>-17</b>	<b>-2</b>	<b>88</b>
In national currency	59	26	-13	-2	70
Other financial corporations	59	26	-13	-2	70
In foreign currency	12	10	-4	0	18
Other financial corporations	12	10	-4	0	18
<b>Loans</b>	<b>22</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>32</b>
Other financial corporations	22	10	0	0	32
<b>Insurance technical reserves</b>	<b>18</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>25</b>
Prepayment of premiums and reserves against outstanding claims	18	7	0	0	25
Other financial corporations	18	7	0	0	25
<b>Financial derivatives</b>	<b>33</b>	<b>-7</b>	<b>7</b>	<b>-2</b>	<b>31</b>
Other financial corporations	33	-7	7	-2	31
<b>Other accounts payable</b>	<b>14</b>	<b>-6</b>	<b>0</b>	<b>0</b>	<b>8</b>
<b>Trade credit and advances</b>	<b>14</b>	<b>-6</b>	<b>0</b>	<b>0</b>	<b>8</b>
Other financial corporations	14	-6	0	0	8
<b>Other</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Resident sectors</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Settlements accounts</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Other financial corporations	0	0	0	0	0
<b>Minus:</b>					
<b>Assets (OFCs sectoral balance sheet)</b>	<b>175</b>	<b>18</b>	<b>3</b>	<b>-2</b>	<b>194</b>
<b>Securities other than shares</b>	<b>71</b>	<b>16</b>	<b>2</b>	<b>-1</b>	<b>88</b>
Other financial corporations	71	16	2	-1	88
<b>Loans</b>	<b>22</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>26</b>
Other financial corporations	22	4	0	0	26
<b>Shares and other equity</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>
Other financial corporations	8	0	0	0	8
<b>Insurance technical reserves</b>	<b>18</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>20</b>
Other financial corporations	18	2	0	0	20
<b>Financial derivatives</b>	<b>33</b>	<b>-6</b>	<b>0</b>	<b>0</b>	<b>27</b>
Other financial corporations	33	-6	0	0	27
<b>Other accounts receivable</b>	<b>23</b>	<b>2</b>	<b>1</b>	<b>-1</b>	<b>25</b>
<b>Trade credit and advances</b>	<b>14</b>	<b>5</b>	<b>1</b>	<b>-1</b>	<b>19</b>
Other financial corporations	14	5	1	-1	19
<b>Other</b>	<b>9</b>	<b>-3</b>	<b>0</b>	<b>0</b>	<b>6</b>
<b>Resident sectors</b>	<b>9</b>	<b>-3</b>	<b>0</b>	<b>0</b>	<b>6</b>
<b>Settlements accounts</b>	<b>9</b>	<b>-3</b>	<b>0</b>	<b>0</b>	<b>6</b>
Other financial corporations	9	-3	0	0	6
<b>Consolidation Adjustment: Liabilities-Assets</b>	<b>-17</b>	<b>22</b>	<b>-13</b>	<b>-2</b>	<b>-10</b>

Table 7.7. Consolidation Adjustment: Financial Corporations Survey

	Opening Stock	Transactions	Valuation Changes	Other Changes in Volume	Closing Stock
<b>Liabilities to depository corporations (OFCS)</b>	<b>191</b>	<b>44</b>	<b>16</b>	<b>-2</b>	<b>249</b>
<b>Securities other than shares (OFCS)</b>	<b>3</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>9</b>
Of which: Depository corporations	3	6	0	0	9
<b>Loans (OFCS)</b>	<b>36</b>	<b>-10</b>	<b>4</b>	<b>0</b>	<b>30</b>
Of which: Depository corporations	36	-10	4	0	30
<b>Financial derivatives (OFCS)</b>	<b>78</b>	<b>21</b>	<b>12</b>	<b>-2</b>	<b>109</b>
Of which: Depository corporations	78	21	12	-2	109
<b>Insurance technical reserve (OFCS)</b>	<b>30</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>44</b>
<b>Prepayment of premiums and reserves against outstanding claims</b>	<b>30</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>44</b>
Of which: Depository corporations	30	14	0	0	44
<b>Trade credit and advances (OFCS)</b>	<b>29</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>35</b>
Of which: Depository corporations	29	6	0	0	35
<b>Settlements accounts (OFCS)</b>	<b>15</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>22</b>
Of which: Depository corporations	15	7	0	0	22
<b>Liabilities to OFCs (DCS)</b>	<b>9,490</b>	<b>925</b>	<b>63</b>	<b>-3</b>	<b>10,475</b>
<b>Broad money liabilities (DCS)</b>	<b>8,994</b>	<b>909</b>	<b>40</b>	<b>-3</b>	<b>9,940</b>
<b>Transferable deposits (DCS)</b>	<b>8,763</b>	<b>887</b>	<b>13</b>	<b>-3</b>	<b>9,660</b>
Of which: Other financial corporations	8,763	887	13	-3	9,660
<b>Other deposits (DCS)</b>	<b>130</b>	<b>14</b>	<b>3</b>	<b>0</b>	<b>147</b>
Of which: Other financial corporations	130	14	3	0	147
<b>Securities other than shares, included in broad money (DCS)</b>	<b>101</b>	<b>8</b>	<b>24</b>	<b>0</b>	<b>133</b>
Of which: Other financial corporations	101	8	24	0	133
<b>Deposits excluded from broad money (DCS)</b>	<b>312</b>	<b>-10</b>	<b>4</b>	<b>0</b>	<b>306</b>
Of which: Other financial corporations	312	-10	4	0	306
<b>Securities other than shares, excluded from broad money (DCS)</b>	<b>106</b>	<b>11</b>	<b>19</b>	<b>2</b>	<b>138</b>
Of which: Other financial corporations	106	11	19	2	138
<b>Financial derivatives (DCS)</b>	<b>34</b>	<b>-3</b>	<b>0</b>	<b>-2</b>	<b>29</b>
Of which: Other financial corporations	34	-3	0	-2	29
<b>Trade credit and advances (DCS)</b>	<b>28</b>	<b>19</b>	<b>0</b>	<b>0</b>	<b>47</b>
Of which: Other financial corporations	28	19	0	0	47
<b>Settlements accounts (DCS)</b>	<b>16</b>	<b>-1</b>	<b>0</b>	<b>0</b>	<b>15</b>
Of which: Other financial corporations	16	-1	0	0	15
<b>Minus:</b>					
<b>Domestic claims (DCS)</b>	<b>285</b>	<b>364</b>	<b>-1</b>	<b>2</b>	<b>648</b>
<b>Claims on other sectors</b>	<b>285</b>	<b>364</b>	<b>-1</b>	<b>2</b>	<b>648</b>
Of which: Other financial corporations	285	364	-1	2	648
<b>Claims on depository corporations (OFCS)</b>	<b>9,474</b>	<b>915</b>	<b>23</b>	<b>-23</b>	<b>10,389</b>
Other claims	9,474	915	23	-23	10,389
<b>Plus:</b>					
<b>Consolidation adjustment (OFCS)</b>	<b>-17</b>	<b>22</b>	<b>-13</b>	<b>-2</b>	<b>-10</b>
<b>Consolidation adjustment (DCS)</b>	<b>60</b>	<b>208</b>	<b>53</b>	<b>-14</b>	<b>305</b>
<b>Consolidation Adjustment</b>	<b>-35</b>	<b>-80</b>	<b>97</b>	<b>0</b>	<b>-18</b>

Table 7.8. Central Bank Survey

	Opening Stock	Transactions	Valuation Changes	Other Changes in Volume	Closing Stock
<b>Net foreign assets</b>	<b>12,886</b>	<b>4,708</b>	<b>2,015</b>	<b>3</b>	<b>19,612</b>
<b>Claims on nonresidents</b>	<b>16,400</b>	<b>4,642</b>	<b>2,389</b>	<b>3</b>	<b>23,434</b>
Monetary gold and SDR holdings	430	70	47	3	550
Foreign currency	29	15	3		47
Deposits	4,606	2,196	691		7,493
Securities other than shares	3,802	1,148	570		5,520
Loans	6,508	1,128	976		8,612
Financial derivatives	751	91	113		955
Other	274	-6	-11		257
<b>less: Liabilities to nonresidents</b>	<b>-3,514</b>	<b>66</b>	<b>-374</b>	<b>0</b>	<b>-3,822</b>
Deposits	-2,117	54	-26	0	-2,089
Securities other than shares	-77	5			-72
Loans	-1,105		-201		-1,306
Financial derivatives	-126	-19	-175		-320
Other	-89	26	28		-35
<b>Claims on other depository corporations</b>	<b>1,658</b>	<b>-108</b>	<b>9</b>		<b>1,561</b>
<b>Net claims on central government</b>	<b>3,501</b>	<b>-929</b>	<b>630</b>		<b>3,202</b>
<b>Claims on central government</b>	<b>4,519</b>	<b>-804</b>	<b>630</b>		<b>4,345</b>
Securities	4,105	-809	616		3,912
Other claims	414	5	14		433
<b>less: Liabilities to central government</b>	<b>-1,018</b>	<b>-125</b>			<b>-1,143</b>
Deposits	-1,000	-115			-1,115
Other liabilities	-18	-10			-28
<b>Claims on other sectors</b>	<b>443</b>	<b>603</b>	<b>6</b>	<b>-10</b>	<b>1,040</b>
Other financial corporations	116	353	-1		466
State and local government	33	-6			27
Public nonfinancial corporations	181	254	5	-5	435
Other nonfinancial corporations	93	-5	2	-3	87
Other resident sectors	20	7		-2	25
<b>Monetary base</b>	<b>19,116</b>	<b>2,377</b>	<b>-212</b>	<b>2</b>	<b>21,283</b>
<b>Currency in circulation</b>	<b>4,007</b>	<b>250</b>			<b>4,257</b>
<b>Liabilities to other depository corporations</b>	<b>11,390</b>	<b>1,733</b>	<b>-220</b>	<b>5</b>	<b>12,908</b>
Reserve deposits	10,979	1,604	-257	3	12,329
Other liabilities	411	129	37	2	579
<b>Deposits included in broad money</b>	<b>3,719</b>	<b>394</b>	<b>8</b>	<b>-3</b>	<b>4,118</b>
<b>Transferable deposits</b>	<b>3,269</b>	<b>423</b>	<b>8</b>	<b>-3</b>	<b>3,697</b>
Other financial corporations	54	17	8	-3	76
State and local government					
Public nonfinancial corporations	48	13			61
Other nonfinancial corporations					
Other resident sectors	3,167	393			3,560
<b>Other deposits</b>	<b>450</b>	<b>-29</b>			<b>421</b>
Other financial corporations	70	5			75
State and local government	230	-45			185
Public nonfinancial corporations	150	11			161
Other nonfinancial corporations					
Other resident sectors					
<b>Securities other than shares, included in broad money</b>					
Other financial corporations					
State and local government					
Public nonfinancial corporations					
Other nonfinancial corporations					
Other resident sectors					



Table 7.8 (concluded)

	Opening Stock	Transactions	Valuation Changes	Other Changes in Volume	Closing Stock
<b>Deposits excluded from broad money</b>					
<i>Of which: Other financial corporations</i>					
<b>Securities other than shares, excluded from broad money</b>					
<i>Of which: Other financial corporations</i>					
<b>Loans</b>					
<i>Of which: Other financial corporations</i>					
<b>Financial derivatives</b>	<b>79</b>	<b>-3</b>	<b>8</b>	<b>-2</b>	<b>82</b>
<i>Of which: Other financial corporations</i>	22	-5	2	-2	17
<b>Trade credit and advances</b>	<b>82</b>	<b>15</b>			<b>97</b>
<i>Of which: Other financial corporations</i>	24	11			35
<b>Settlements accounts</b>	<b>10</b>	<b>-1</b>			<b>9</b>
<i>Of which: Other financial corporations</i>	4	2			6
<b>Shares and other equity</b>	<b>388</b>	<b>1,840</b>	<b>2,861</b>	<b>-4</b>	<b>5,085</b>
Funds contributed by owners	122				122
Retained earnings	95	1,840	2,320	-13	4,242
General and special reserves	46			9	55
SDR allocations	37		8		45
Valuation adjustment	88		533		621
<b>Other items (net)</b>	<b>-1,187</b>	<b>46</b>	<b>3</b>	<b>-3</b>	<b>-1,141</b>
<b>Other liabilities</b>	<b>54</b>	<b>68</b>	<b>12</b>	<b>-10</b>	<b>124</b>
<i>less: Other assets</i>	<b>-1,241</b>	<b>-22</b>	<b>-9</b>	<b>7</b>	<b>-1,265</b>
<b>VERTICAL CHECK</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

Table 7.9. Other Depository Corporations Survey

	Opening Stock	Transactions	Valuation Changes	Other Changes in Volume	Closing Stock
<b>Net foreign assets</b>	<b>9,724</b>	<b>2,306</b>	<b>2,243</b>	<b>6</b>	<b>14,279</b>
<b>Claims on nonresidents</b>	<b>15,480</b>	<b>2,567</b>	<b>2,581</b>	<b>12</b>	<b>20,640</b>
Foreign currency	1,234	214	141	3	1,592
Deposits	13,246	2,213	2,308		17,767
Securities other than shares	340	7	51		398
Loans	412	31	70	2	515
Financial derivatives	35	-12	-5	2	20
Other	213	114	16	5	348
<b>less: Liabilities to nonresidents</b>	<b>-5,756</b>	<b>-261</b>	<b>-338</b>	<b>-6</b>	<b>-6,361</b>
Deposits	-2,178	-171	-112		-2,461
Securities other than shares	-1,085	8	-209	-3	-1,289
Loans	-596	150	2	-2	-446
Financial derivatives	-112	14	-31	-1	-130
Other	-1,785	-262	12		-2,035
<b>Claims on central bank</b>	<b>11,641</b>	<b>1,799</b>	<b>-208</b>	<b>6</b>	<b>13,238</b>
<b>Currency</b>	<b>357</b>	<b>69</b>		<b>2</b>	<b>428</b>
<b>Reserve deposits</b>	<b>10,875</b>	<b>1,592</b>	<b>-246</b>	<b>2</b>	<b>12,223</b>
<b>Other claims</b>	<b>409</b>	<b>138</b>	<b>38</b>	<b>2</b>	<b>587</b>
<b>Net claims on central government</b>	<b>8,697</b>	<b>2,608</b>	<b>98</b>	<b>5</b>	<b>11,408</b>
<b>Claims on central government</b>	<b>8,805</b>	<b>2,606</b>	<b>99</b>	<b>6</b>	<b>11,516</b>
Securities other than shares	8,796	2,605	99	6	11,506
Other claims	9	1			10
<b>less: Liabilities to central government</b>	<b>-108</b>	<b>2</b>	<b>-1</b>	<b>-1</b>	<b>-108</b>
Deposits	-56	7	-1		-50
Other liabilities	-52	-5	0	-1	-58
<b>Claims on other sectors</b>	<b>98,194</b>	<b>300</b>	<b>516</b>	<b>-501</b>	<b>98,509</b>
Other financial corporations	169	11		2	182
State and local government	139	-3		2	138
Public nonfinancial corporations	5,746	206	69	-51	5,970
Other nonfinancial corporations	71,903	-469	272	-279	71,427
Other resident sectors	20,237	555	175	-175	20,792
<b>Liabilities to central bank</b>	<b>1,599</b>	<b>28</b>	<b>13</b>	<b>2</b>	<b>1,642</b>
<b>Deposits included in broad money</b>	<b>91,417</b>	<b>2,775</b>	<b>2,520</b>	<b>7</b>	<b>96,719</b>
<b>Transferable deposits</b>	<b>39,398</b>	<b>4,120</b>	<b>31</b>	<b>7</b>	<b>43,556</b>
Other financial corporations	8,709	870	5		9,584
State and local government	448	45	2		495
Public nonfinancial corporations	6,534	823	4		7,361
Other nonfinancial corporations	13,002	1,320	12	7	14,341
Other resident sectors	10,705	1,062	8		11,775
<b>Other deposits</b>	<b>52,019</b>	<b>-1,345</b>	<b>2,489</b>		<b>53,163</b>
Other financial corporations	60	9	3		72
State and local government	54	-2	1		53
Public nonfinancial corporations	120	9	3		132
Other nonfinancial corporations	15,012	-1,730	397		13,679
Other resident sectors	36,773	369	2,085		39,227
<b>Securities other than shares, included in broad money</b>	<b>27,097</b>	<b>37</b>	<b>4,166</b>	<b>17</b>	<b>31,317</b>
Other financial corporations	101	8	24		133
State and local government	21	-7	3		17
Public nonfinancial corporations	473	14	84		571
Other nonfinancial corporations	13,700	51	2,094	1	15,846
Other resident sectors	12,802	-29	1,961	16	14,750

Table 7.9 (concluded)

	Opening Stock	Transactions	Valuation Changes	Other Changes in Volume	Closing Stock
<b>Deposits excluded from broad money</b>	<b>1087</b>	<b>13</b>	<b>40</b>		<b>1,140</b>
<i>Of which: Other financial corporations</i>	312	-10	4		306
<b>Securities other than shares, excluded from broad money</b>	<b>530</b>	<b>107</b>	<b>113</b>	<b>6</b>	<b>756</b>
<i>Of which: Other financial corporations</i>	106	11	19	2	138
<b>Loans</b>	<b>7</b>			<b>-7</b>	<b>0</b>
<i>Of which: Other financial corporations</i>					
<b>Financial derivatives</b>	<b>108</b>	<b>16</b>	<b>16</b>	<b>2</b>	<b>142</b>
<i>Of which: Other financial corporations</i>	12	2	-2		12
<b>Trade credit and advances</b>	<b>30</b>	<b>-1</b>		<b>3</b>	<b>32</b>
<i>Of which: Other financial corporations</i>	4	8			12
<b>Settlements accounts</b>	<b>114</b>	<b>-42</b>			<b>72</b>
<i>Of which: Other financial corporations</i>	12	-3			9
<b>Shares and other equity</b>	<b>20,100</b>	<b>5,250</b>	<b>-4,060</b>	<b>41</b>	<b>21,331</b>
Funds contributed by owners	7,896			24	7,920
Retained earnings	6,342	5,250	-3,530	-5	8,057
General and special reserves	4,732			22	4,754
Valuation adjustment	1,130		-530		600
<b>Other items (net)</b>	<b>-13,833</b>	<b>-1,170</b>	<b>-159</b>	<b>-555</b>	<b>-15,717</b>
<b>Other liabilities</b>	<b>1,748</b>	<b>6</b>		<b>-541</b>	<b>1,213</b>
<b>less: Other assets</b>	<b>-15,594</b>	<b>-1,245</b>	<b>-220</b>	<b>3</b>	<b>-17,056</b>
<b>plus: Consolidation adjustment</b>	<b>13</b>	<b>69</b>	<b>61</b>	<b>-17</b>	<b>126</b>
<b>VERTICAL CHECK</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

Table 7.10. Other Financial Corporations Survey

	Opening Stock	Transactions	Valuation Changes	Other Changes in Volume	Closing Stock
<b>Net foreign assets</b>	<b>5,060</b>	<b>1,960</b>	<b>2,125</b>	<b>-9</b>	<b>9,136</b>
<b>Claims on nonresidents</b>	<b>15,753</b>	<b>2,310</b>	<b>2,164</b>	<b>-15</b>	<b>20,212</b>
Foreign currency	762	22	117	-3	898
Deposits	1,252	439	188		1,879
Securities other than shares	12,389	1,713	1,800	-3	15,899
Loans	512	-17	59	-2	552
Financial derivatives	32	105	7	-2	142
Other	806	48	-7	-5	842
<b>less: Liabilities to nonresidents</b>	<b>-10,693</b>	<b>-350</b>	<b>-39</b>	<b>6</b>	<b>-11,076</b>
Deposits					
Securities other than shares	-59	-8	19	3	-45
Loans	-11	-3	-4	2	-16
Financial derivatives	-12	-13	-3	1	-27
Other	-10,611	-326	-51		-10,988
<b>Claims on depository corporations</b>	<b>9,597</b>	<b>901</b>	<b>23</b>	<b>-25</b>	<b>10,496</b>
<b>Currency</b>	<b>123</b>	<b>-14</b>	<b>0</b>	<b>-2</b>	<b>107</b>
<b>Other claims</b>	<b>9,474</b>	<b>915</b>	<b>23</b>	<b>-23</b>	<b>10,389</b>
<b>Net claims on central government</b>	<b>22,649</b>	<b>447</b>	<b>11</b>	<b>-5</b>	<b>23,102</b>
<b>Claims on central government</b>	<b>22,676</b>	<b>458</b>	<b>12</b>	<b>-6</b>	<b>23,140</b>
Securities	22,676	458	12	-6	23,140
Other claims					
<b>less: Liabilities to central government</b>	<b>-27</b>	<b>-11</b>	<b>-1</b>	<b>1</b>	<b>-38</b>
Deposits					
Other liabilities	-27	-11	-1	1	-38
<b>Claims on other sectors</b>	<b>92,586</b>	<b>4,841</b>	<b>41</b>	<b>-86</b>	<b>97,382</b>
State and local government	3,288	147		-2	3,433
Public nonfinancial corporations	8,455	-303	21	-33	8,140
Other nonfinancial corporations	77,584	4,910	12	-32	82,474
Other resident sectors	3,259	87	8	-19	3,335
<b>Deposits</b>					
<i>Of which: Depository corporations</i>					
<b>Securities other than shares</b>	<b>288</b>	<b>28</b>	<b>-13</b>	<b>-21</b>	<b>282</b>
<i>Of which: Depository corporations</i>	3	6			9
<b>Loans</b>	<b>41</b>	<b>-6</b>	<b>2</b>		<b>37</b>
<i>Of which: Depository corporations</i>	36	-10	4		30
<b>Financial derivatives</b>	<b>89</b>	<b>26</b>	<b>16</b>	<b>-4</b>	<b>127</b>
<i>Of which: Depository corporations</i>	78	21	12	-2	109
<b>Insurance technical reserve</b>	<b>129,102</b>	<b>6,831</b>	<b>1,623</b>		<b>137,556</b>
Net equity of households in life insurance reserves	22,357	2,221			24,578
Net equity of households in pension funds	99,999	4,365	1,623		105,987
Prepayment of premiums and reserves against outstanding claims	6,746	245			6,991
<i>Of which: Depository corporations</i>	30	14			44
<b>Trade credit and advances</b>	<b>81</b>	<b>1</b>		<b>-3</b>	<b>79</b>
<i>Of which: Depository corporations</i>	29	6			35
<b>Settlements accounts</b>	<b>50</b>	<b>23</b>			<b>73</b>
<i>Of which: Depository corporations</i>	15	7			22
<b>Shares and other equity</b>	<b>11,336</b>	<b>1,150</b>	<b>535</b>	<b>-49</b>	<b>12,972</b>
Funds contributed by owners	5,676			-24	5,652
Retained earnings	4,572	1,150	450	-27	6,145
General and special reserves	432			2	434
Valuation adjustment	656		85		741
<b>Other items (net)</b>	<b>-11,095</b>	<b>96</b>	<b>37</b>	<b>-48</b>	<b>-11,010</b>
<b>Other liabilities</b>	<b>137</b>	<b>125</b>	<b>40</b>	<b>-48</b>	<b>254</b>
<b>less: Other assets</b>	<b>-11,215</b>	<b>-51</b>	<b>10</b>	<b>2</b>	<b>-11,254</b>
<b>plus: Consolidation adjustment</b>	<b>-17</b>	<b>22</b>	<b>-13</b>	<b>-2</b>	<b>-10</b>
<b>VERTICAL CHECK</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

Table 7.11. Depository Corporations Survey

	Opening Stock	Transactions	Valuation Changes	Other Changes in Volume	Closing Stock
<b>Net foreign assets</b>	<b>22,610</b>	<b>7,014</b>	<b>4,258</b>	<b>9</b>	<b>33,891</b>
<b>Claims on nonresidents</b>	<b>31,880</b>	<b>7,209</b>	<b>4,970</b>	<b>15</b>	<b>44,074</b>
<i>less: Liabilities to nonresidents</i>	<i>-9,270</i>	<i>-195</i>	<i>-712</i>	<i>-6</i>	<i>-10,183</i>
<b>Domestic claims</b>	<b>110,835</b>	<b>2,582</b>	<b>1,250</b>	<b>-506</b>	<b>114,159</b>
<b>Net claims on central government</b>	<b>12,198</b>	<b>1,679</b>	<b>728</b>	<b>5</b>	<b>14,610</b>
<b>Claims on central government</b>	<b>13,324</b>	<b>1,802</b>	<b>729</b>	<b>6</b>	<b>15,861</b>
<i>less: Liabilities to central government</i>	<i>-1,126</i>	<i>-123</i>	<i>-1</i>	<i>-1</i>	<i>-1,251</i>
<b>Claims on other sectors</b>	<b>98,637</b>	<b>903</b>	<b>522</b>	<b>-511</b>	<b>99,549</b>
Other financial corporations	285	364	-1	2	648
State and local government	172	-9		2	165
Public nonfinancial corporations	5,927	460	74	-56	6,405
Other nonfinancial corporations	71,996	-474	274	-282	71,514
Other resident sectors	20,257	562	175	-177	20,817
<b>Broad money liabilities</b>	<b>125,750</b>	<b>3,342</b>	<b>6,694</b>	<b>19</b>	<b>135,805</b>
<b>Currency outside depository corporations</b>	<b>3,650</b>	<b>181</b>		<b>-2</b>	<b>3,829</b>
<b>Transferable deposits</b>	<b>42,534</b>	<b>4,498</b>	<b>39</b>	<b>4</b>	<b>47,075</b>
Other financial corporations	8,763	887	13	-3	9,660
State and local government	448	45	2		495
Public nonfinancial corporations	6,582	836	4		7,422
Other nonfinancial corporations	13,002	1,320	12	7	14,341
Other resident sectors	13,872	1,455	8		15,335
<i>less: Central bank float</i>	<i>-133</i>	<i>-45</i>			<i>-178</i>
<b>Other deposits</b>	<b>52,469</b>	<b>-1,374</b>	<b>2,489</b>		<b>53,584</b>
Other financial corporations	130	14	3		147
State and local government	284	-47	1		238
Public nonfinancial corporations	270	20	3		293
Other nonfinancial corporations	15,012	-1,730	397		13,679
Other resident sectors	36,773	369	2,085		39,227
<b>Securities other than shares, included in broad money</b>	<b>27,097</b>	<b>37</b>	<b>4,166</b>	<b>17</b>	<b>31,317</b>
Other financial corporations	101	8	24		133
State and local government	21	-7	3		17
Public nonfinancial corporations	473	14	84		571
Other nonfinancial corporations	13,700	51	2,094	1	15,846
Other resident sectors	12,802	-29	1,961	16	14,750
<b>Deposits excluded from broad money</b>	<b>1,087</b>	<b>13</b>	<b>40</b>		<b>1,140</b>
<i>Of which: Other financial corporations</i>	<i>312</i>	<i>-10</i>	<i>4</i>		<i>306</i>
<b>Securities other than shares, excluded from broad money</b>	<b>530</b>	<b>107</b>	<b>113</b>	<b>6</b>	<b>756</b>
<i>Of which: Other financial corporations</i>	<i>106</i>	<i>11</i>	<i>19</i>	<i>2</i>	<i>138</i>
<b>Loans</b>	<b>7</b>			<b>-7</b>	
<i>Of which: Other financial corporations</i>					
<b>Financial derivatives</b>	<b>187</b>	<b>13</b>	<b>24</b>		<b>224</b>
<i>Of which: Other financial corporations</i>	<i>34</i>	<i>-3</i>		<i>-2</i>	<i>29</i>
<b>Trade credit and advances</b>	<b>112</b>	<b>14</b>		<b>3</b>	<b>129</b>
<i>Of which: Other financial corporations</i>	<i>28</i>	<i>19</i>			<i>47</i>
<b>Settlements accounts</b>	<b>124</b>	<b>-43</b>			<b>81</b>
<i>Of which: Other financial corporations</i>	<i>16</i>	<i>-1</i>			<i>15</i>
<b>Shares and other equity</b>	<b>20,488</b>	<b>7,090</b>	<b>-1,199</b>	<b>37</b>	<b>26,416</b>
<b>Other items (net)</b>	<b>-14,840</b>	<b>-940</b>	<b>-164</b>	<b>-555</b>	<b>-16,501</b>
<b>Other liabilities (includes central bank float)</b>	<b>1,935</b>	<b>119</b>	<b>12</b>	<b>-551</b>	<b>1,515</b>
<i>less: Other assets</i>	<i>-16,835</i>	<i>-1,267</i>	<i>-229</i>	<i>10</i>	<i>-18,321</i>
<b>plus: Consolidation adjustment</b>	<b>60</b>	<b>208</b>	<b>53</b>	<b>-14</b>	<b>305</b>
<i>Memoranda: Central bank float</i>	<i>133</i>	<i>45</i>			<i>178</i>
<b>VERTICAL CHECK</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

Table 7.12. *Financial Corporations Survey*

	Opening Stock	Transactions	Valuation Changes	Other Changes in Volume	Closing Stock
<b>Net foreign assets</b>	<b>27,670</b>	<b>8,974</b>	<b>6,383</b>	<b>0</b>	<b>43,027</b>
<b>Claims on nonresidents</b>	<b>47,633</b>	<b>9,519</b>	<b>7,134</b>		<b>64,286</b>
<i>less: Liabilities to nonresidents</i>	<i>-19,963</i>	<i>-545</i>	<i>-751</i>	<b>0</b>	<i>-21,259</i>
<b>Domestic claims</b>	<b>225,785</b>	<b>7,506</b>	<b>1,303</b>	<b>-599</b>	<b>233,995</b>
<b>Net claims on central government</b>	<b>34,847</b>	<b>2,126</b>	<b>739</b>		<b>37,712</b>
<b>Claims on central government</b>	<b>36,000</b>	<b>2,260</b>	<b>741</b>		<b>39,001</b>
<i>less: Liabilities to central government</i>	<i>-1,153</i>	<i>-134</i>	<i>-2</i>		<i>-1,289</i>
<b>Claims on other sectors</b>	<b>190,938</b>	<b>5,380</b>	<b>564</b>	<b>-599</b>	<b>196,283</b>
State and local government	3,460	138			3,598
Public nonfinancial corporations	14,382	157	95	-89	14,545
Other nonfinancial corporations	149,580	4,436	286	-314	153,988
Other resident sectors	23,516	649	183	-196	24,152
<b>Currency outside financial corporations</b>	<b>3,527</b>	<b>195</b>			<b>3,722</b>
<b>Deposits</b>	<b>86,885</b>	<b>2,246</b>	<b>2,548</b>	<b>7</b>	<b>91,686</b>
<b>Securities other than shares</b>	<b>27,705</b>	<b>147</b>	<b>4,223</b>		<b>32,075</b>
<b>Loans</b>	<b>12</b>	<b>4</b>	<b>-2</b>	<b>-7</b>	<b>7</b>
<b>Financial derivatives</b>	<b>164</b>	<b>21</b>	<b>28</b>		<b>213</b>
<b>Insurance technical reserves</b>	<b>129,072</b>	<b>6,817</b>	<b>1,623</b>		<b>137,512</b>
<b>Trade credit and advances</b>	<b>136</b>	<b>-10</b>			<b>126</b>
<b>Settlements accounts</b>	<b>143</b>	<b>-26</b>			<b>117</b>
<b>Shares and other equity</b>	<b>31,824</b>	<b>8,240</b>	<b>-664</b>	<b>-12</b>	<b>39,388</b>
<b>Other items (net)</b>	<b>-26,013</b>	<b>-1,154</b>	<b>-70</b>	<b>-587</b>	<b>-27,824</b>
<b>Other liabilities</b>	<b>2,072</b>	<b>244</b>	<b>52</b>	<b>-599</b>	<b>1,769</b>
<i>less: Other assets</i>	<i>-28,050</i>	<i>-1,318</i>	<i>-219</i>	<b>12</b>	<i>-29,575</i>
<i>plus: Consolidation adjustment</i>	<i>-35</i>	<i>-80</i>	<b>97</b>	<b>0</b>	<i>-18</i>
<b>VERTICAL CHECK</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

Table 7.13. Monetary Authorities Account

	Opening Stock	Transactions	Valuation Changes	Other Changes in Volume	Closing Stock
<b>Net foreign assets</b>	<b>12,836</b>	<b>4,695</b>	<b>2,012</b>	<b>3</b>	<b>19,546</b>
<b>Claims on nonresidents</b>	<b>16,450</b>	<b>4,634</b>	<b>2,389</b>	<b>3</b>	<b>23,476</b>
Monetary gold and SDR holdings	430	70	47	3	550
Foreign currency	29	15	3		47
Deposits	4,606	2,196	691		7,493
Securities other than shares	3,802	1,148	570		5,520
Loans	6,508	1,128	976		8,612
Financial derivatives	751	91	113		955
Other	274	-6	-11		257
<b>Reserve assets—central government</b>	<b>50</b>	<b>-8</b>			<b>42</b>
<b>less: Liabilities to nonresidents</b>	<b>-3,614</b>	<b>61</b>	<b>-377</b>	<b>0</b>	<b>-3,930</b>
Deposits	-2,117	54	-26	0	-2,089
Securities other than shares	-77	5			-72
Loans	-1,105		-201		-1,306
Financial derivatives	-126	-19	-175		-320
Other	-89	26	28		-35
<b>Liabilities to IMF—central government</b>	<b>-100</b>	<b>-5</b>	<b>-3</b>		<b>-108</b>
<b>Claims on other depository corporations</b>	<b>1,658</b>	<b>-108</b>	<b>9</b>		<b>1,561</b>
<b>Net claims on central government</b>	<b>3,581</b>	<b>-914</b>	<b>633</b>		<b>3,300</b>
<b>Claims on central government</b>	<b>4,649</b>	<b>-797</b>	<b>633</b>	<b>0</b>	<b>4,485</b>
Securities	4,105	-809	616		3,912
Other claims	414	5	14		433
<b>less: Liabilities to central government</b>	<b>-1,068</b>	<b>-117</b>			<b>-1,185</b>
Deposits	-1,000	-115			-1,115
Other liabilities	-18	-10			-28
<b>Claims on other sectors</b>	<b>443</b>	<b>603</b>	<b>6</b>	<b>-10</b>	<b>1,040</b>
Other financial corporations	116	353	-1		466
State and local government	33	-6			27
Public nonfinancial corporations	181	254	5	-5	435
Other nonfinancial corporations	93	-5	2	-3	87
Other resident sectors	20	7		-2	25
<b>Monetary base</b>	<b>19,146</b>	<b>2,379</b>	<b>-212</b>	<b>2</b>	<b>21,315</b>
<b>Currency in circulation—central bank</b>	<b>4,007</b>	<b>250</b>			<b>4,257</b>
<b>Currency issue—central government</b>	<b>30</b>	<b>2</b>			<b>32</b>
<b>Liabilities to other depository corporations</b>	<b>11,390</b>	<b>1,733</b>	<b>-220</b>	<b>5</b>	<b>12,908</b>
Reserve deposits	10,979	1,604	-257	3	12,329
Other liabilities	411	129	37	2	579
<b>Deposits included in broad money</b>	<b>3,719</b>	<b>394</b>	<b>8</b>	<b>-3</b>	<b>4,118</b>
<b>Transferable deposits</b>	<b>3,269</b>	<b>423</b>	<b>8</b>	<b>-3</b>	<b>3,697</b>
Other financial corporations	54	17	8	-3	76
State and local government					
Public nonfinancial corporations	48	13			61
Other nonfinancial corporations					
Other resident sectors	3,167	393			3,560
<b>Other deposits</b>	<b>450</b>	<b>-29</b>			<b>421</b>
Other financial corporations	70	5			75
State and local government	230	-45			185
Public nonfinancial corporations	150	11			161
Other nonfinancial corporations					
Other resident sectors					

Table 7.13 (concluded)

	Opening Stock	Transactions	Valuation Changes	Other Changes in Volume	Closing Stock
<b>Securities other than shares, included in broad money</b>					
Other financial corporations					
State and local government					
Public nonfinancial corporations					
Other nonfinancial corporations					
Other resident sectors					
<b>Deposits excluded from broad money</b>					
<i>Of which: Other financial corporations</i>					
<b>Securities other than shares, excluded from broad money</b>					
<i>Of which: Other financial corporations</i>					
<b>Loans</b>					
<i>Of which: Other financial corporations</i>					
<b>Financial derivatives</b>	<b>79</b>	<b>-3</b>	<b>8</b>	<b>-2</b>	<b>82</b>
<i>Of which: Other financial corporations</i>	22	-5	2	-2	17
<b>Trade credit and advances</b>	<b>82</b>	<b>15</b>			<b>97</b>
<i>Of which: Other financial corporations</i>	24	11			35
<b>Settlements accounts</b>	<b>10</b>	<b>-1</b>			<b>9</b>
<i>Of which: Other financial corporations</i>	4	2			6
<b>Shares and other equity</b>	<b>388</b>	<b>1,840</b>	<b>2,861</b>	<b>-4</b>	<b>5,085</b>
Funds contributed by owners	122				122
Retained earnings	95	1,840	2,320	-13	4,242
General and special reserves	46			9	55
SDR allocations	37		8		45
Valuation adjustment	88		533		621
<b>Other items (net)</b>	<b>-1,267</b>	<b>-31</b>	<b>0</b>	<b>-3</b>	<b>-1,239</b>
<b>Other liabilities (central bank)</b>	<b>54</b>	<b>68</b>	<b>12</b>	<b>-10</b>	<b>124</b>
<i>plus: Contra-entry to reserve assets— central government</i>	<i>50</i>	<i>-8</i>			<i>42</i>
<i>less: Other assets (central bank)</i>	<i>-1,241</i>	<i>-22</i>	<i>-9</i>	<i>7</i>	<i>-1,265</i>
<i>less: Contra-entry to currency issue— central government</i>	<i>-30</i>	<i>-2</i>			<i>-32</i>
<i>less: Contra-entry to liabilities to IMF— central government</i>	<i>-100</i>	<i>-5</i>	<i>-3</i>		<i>-108</i>
<b>VERTICAL CHECK</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>



**Table 7.14. Supplementary Data for the Central Bank, ODCs, and OFCs**

(Supplements to Forms ISR, 2SR, and 4SR)

**ASSETS**
**DEPOSITS**
**Deposits—Claims on nonresidents**

Short-term deposits

Long-term deposits

**SECURITIES OTHER THAN SHARES**
**Securities issued by the central bank (supplements to Form 2SR and Form 4SR only)**

Short-term securities—Denominated in national currency

Long-term securities—Denominated in national currency

Short-term securities—Denominated in foreign currency

Long-term securities—Denominated in foreign currency

**Securities issued by ODCs**

Short-term securities—Denominated in national currency

Long-term securities—Denominated in national currency

Short-term securities—Denominated in foreign currency

Long-term securities—Denominated in foreign currency

**Securities issued by OFCs**

Short-term securities—Denominated in national currency

Long-term securities—Denominated in national currency

Short-term securities—Denominated in foreign currency

Long-term securities—Denominated in foreign currency

**Securities issued by central government**

Short-term securities—Denominated in national currency

Long-term securities—Denominated in national currency

Short-term securities—Denominated in foreign currency

Long-term securities—Denominated in foreign currency

**Securities issued by state and local government**

Short-term securities—Denominated in national currency

Long-term securities—Denominated in national currency

Short-term securities—Denominated in foreign currency

Long-term securities—Denominated in foreign currency

**Securities issued by public nonfinancial corporations**

Short-term securities—Denominated in national currency

Long-term securities—Denominated in national currency

Fixed-rate securities on a coupon basis (including deep-discount basis)

Variable-rate securities on a coupon basis

Other securities (mainly, zero-coupon bonds)

Short-term securities—Denominated in foreign currency

Long-term securities—Denominated in foreign currency

Fixed-rate securities on a coupon basis (including deep-discount basis)

Variable-rate securities on a coupon basis

Other securities (mainly, zero-coupon bonds)

**Securities issued by other nonfinancial corporations**

Short-term securities—Denominated in national currency

Long-term securities—Denominated in national currency

Fixed-rate securities on a coupon basis (including deep-discount basis)

Variable-rate securities on a coupon basis

Other securities (mainly, zero-coupon bonds)

**ASSETS (continued)**

Short-term securities—Denominated in foreign currency

Long-term securities—Denominated in foreign currency

Fixed-rate securities on a coupon basis (including deep-discount basis)

Variable-rate securities on a coupon basis

Other securities (mainly, zero-coupon bonds)

**Securities issued by nonresidents (all sectors of other countries)**

Short-term securities

Long-term securities

**LOANS**
**Loans to public nonfinancial corporations**

Short-term loans—Denominated in national currency

Long-term loans—Denominated in national currency

Fixed-rate loans

Variable-rate loans

Short-term loans—Denominated in foreign currency

Long-term loans—Denominated in foreign currency

Fixed-rate loans

Variable-rate loans

**Loans to other nonfinancial corporations**

Short-term loans—Denominated in national currency

Long-term loans—Denominated in national currency

Fixed-rate loans

Variable-rate loans

Short-term loans—Denominated in foreign currency

Long-term loans—Denominated in foreign currency

Fixed-rate loans

Variable-rate loans

**Loans to other resident sectors (mainly households)**

Short-term loans—Denominated in national currency

Long-term loans—Denominated in national currency

Fixed-rate loans

Real estate (mortgage and home-equity loans)

Consumer installment loans

Other loans

Variable-rate loans

Consumer loans

Other loans

Short-term loans—Denominated in foreign currency

Long-term loans—Denominated in foreign currency

Fixed-rate loans

Variable-rate loans

**Loans to nonresidents (all sectors in other countries)**

Short-term loans—Denominated in national currency

Long-term loans—Denominated in national currency

Fixed-rate loans

Variable-rate loans

Short-term loans—Denominated in foreign currency

Long-term loans—Denominated in foreign currency

Fixed-rate loans

Variable-rate loans

Table 7.14 (continued)

**ASSETS (continued)****SHARES AND OTHER EQUITY****Shares and other equity issued by all domestic sectors**

Shares in investment pools (mutual funds, unit trusts, and other collective investment units)  
 Other shares and other equity  
   Quoted shares (traded in active markets)  
   Other equity (including proprietors' net additions to equity of quasi-corporations)

**Shares and other equity issued by nonresidents**

Shares in investment pools (mutual funds, unit trusts, and other collective investment units)  
 Other shares and other equity  
   Quoted shares (traded in active markets)  
   Other equity (including proprietors' net additions to equity of quasi-corporations)

**FINANCIAL DERIVATIVES****Financial derivatives—All domestic sectors**

Forward contracts  
   Interest-rate swaps and forward rate agreements  
   Currency swaps (including cross-currency interest rate swaps)  
   Other swaps (equity swaps, etc.)  
   Other forward contracts (currency, equity, securities, gold, etc.)  
 Call options (stock, bond, and foreign currency; options on futures and swap contracts; etc.)  
   Exchange-traded options  
   Over-the-counter options  
 Put options (all types)  
   Exchange-traded options  
   Over-the-counter options

**Financial derivatives—Nonresidents**

Forward contracts  
   Interest-rate swaps and forward rate agreements  
   Currency swaps (including cross-currency interest rate swaps)  
   Other swaps (equity swaps, etc.)  
   Other forward contracts (currency, equity, securities, gold, etc.)  
 Call options (stock, bond, and foreign currency; options on futures and swap contracts; etc.)  
   Exchange-traded options  
   Over-the-counter options  
 Put options (all types)  
   Exchange-traded options  
   Over-the-counter options

**LIABILITIES****DEPOSITS****Deposits included in broad money (central bank and ODC liabilities only)**

Short-term deposits—Denominated in national currency  
 Long-term deposits—Denominated in national currency  
 Short-term deposits—Denominated in foreign currency  
 Long-term deposits—Denominated in foreign currency

**LIABILITIES (continued)****Deposits excluded from broad money**

Short-term deposits—Denominated in national currency  
 Long-term deposits—Denominated in national currency  
 Short-term deposits—Denominated in foreign currency  
 Long-term deposits—Denominated in foreign currency

**SECURITIES OTHER THAN SHARES****Securities other than shares, included in broad money (central bank and ODC liabilities only)**

Short-term securities—Denominated in national currency  
 Long-term securities—Denominated in national currency  
 Short-term securities—Denominated in foreign currency  
 Long-term securities—Denominated in foreign currency

**Securities other than shares, excluded from broad money—Liabilities to all domestic sectors**

Short-term securities—Denominated in national currency  
 Long-term securities—Denominated in national currency  
 Short-term securities—Denominated in foreign currency  
 Long-term securities—Denominated in foreign currency

**Securities other than shares, excluded from broad money—Liabilities to nonresidents**

Short-term securities—Denominated in national currency  
 Long-term securities—Denominated in national currency  
 Short-term securities—Denominated in foreign currency  
 Long-term securities—Denominated in foreign currency

**LOANS****Loans—Liabilities to nonresidents**

Short-term loans—Denominated in national currency  
 Long-term loans—Denominated in national currency  
   Fixed-rate loans  
   Variable-rate loans  
 Short-term loans—Denominated in foreign currency  
 Long-term loans—Denominated in foreign currency  
   Fixed-rate loans  
   Variable-rate loans

**FINANCIAL DERIVATIVES****Financial derivatives—Liabilities to all domestic sectors**

Forward contracts (for swap contracts, amounts outstanding prior to payment swaps)  
 Interest rate swaps and forward rate agreements  
 Currency swaps (including cross-currency interest rate swaps)  
 Other swaps (equity swaps, etc.)  
 Other forward contracts (currency, equity, securities, gold, etc.)  
 Call options (all types, including options on futures and swap contracts)  
   Exchange-traded options  
   Over-the-counter options  
 Put options (all types)  
   Exchange-traded options  
   Over-the-counter options

Table 7.14 (concluded)

**LIABILITIES (continued)**

**Financial derivatives—Liabilities to nonresidents**

- Forward contracts (for swap contracts, amounts outstanding prior to payment swaps)
- Interest rate swaps and forward rate agreements
- Currency swaps (including cross-currency interest rate swaps)
- Other swaps (equity swaps, etc.)
- Other forward contracts (currency, equity, securities, gold, etc.)
- Call options (all types)
  - Exchange-traded options
  - Over-the-counter options
- Put options (all types)
  - Exchange-traded options
  - Over-the-counter options

**MEMORANDUM ITEMS**

**FINANCIAL DERIVATIVES: NOTIONAL PRINCIPAL**

**ASSETS**

**Domestic sectors**

- Futures contracts (all types)—Notional principal
- Forward contracts—Notional principal
  - Interest rate swaps and forward rate agreements
  - Currency swaps (including cross-currency interest rate swaps)
  - Other swaps (equity swaps, etc.)
  - Other forward contracts (currency, equity, securities, etc.)

**Nonresidents**

- Futures contracts (all types)—Notional principal
- Forward contracts—Notional principal
  - Interest rate swaps and forward rate agreements
  - Currency swaps (including cross-currency interest rate swaps)
  - Other swaps (equity swaps, etc.)
  - Other forward contracts (currency, equity, securities, etc.)

**LIABILITIES**

**Domestic sectors**

- Futures contracts (all types)—Notional principal
- Forward contracts—Notional principal
  - Interest rate swaps and forward rate agreements
  - Currency swaps (including cross-currency interest rate swaps)
  - Other swaps (equity swaps, etc.)
  - Other forward contracts (currency, equity, securities, gold, etc.)

**Nonresidents**

- Futures contracts (all types)—Notional principal
- Forward contracts—Notional principal
  - Interest rate swaps and forward rate agreements
  - Currency swaps (including cross-currency interest rate swaps)
  - Other swaps (equity swaps, etc.)
  - Other forward contracts (currency, equity, securities, gold, etc.)

## 8. Financial Statistics

### Introduction

**8.1** This chapter offers a systematic approach to developing a country's financial statistics, building on the principles described in Chapter VIII of the *MFSM* and describing the steps for compiling one or more of *three levels* of financial accounts—basic flow of fund accounts, a *1993 SNA*-integrated financial account and corresponding balance sheet, and detailed financial statistics. This chapter is based on international guidelines found in the *1993 SNA* and the *MFSM* and on methodologies developed at the national level.

**8.2** The purpose of this approach is to facilitate the compilation of financial statistics in countries that do not currently have such statistics, as well as to assist other countries in improving the quality of their financial statistics with respect to (1) adherence to international accounting and statistical standards for classification, economic sectorization, valuation, and application of other accounting rules for financial assets and liabilities, (2) comprehensiveness and consistency of stock and flow data; and (3) appropriateness of the periodicity and timeliness of their financial statistics.

**8.3** Before illustrating the three levels of financial accounts and providing compilation steps, the chapter briefly describes the nature and scope of the financial statistics, compilation methods and source data, and the presentation of the resulting data. (The delineation of economic sectors and classifications and valuation methods for financial assets and liabilities are covered in Chapters 3–5 of this *Guide*.)

**8.4** This chapter describes the recommended framework of the financial statistics—*balance sheets* and *accumulation accounts*—with emphasis on the *flow of funds accounts*. Balance sheets show stocks of

nonfinancial and financial assets and liabilities on the date for which the balance sheet is compiled. Accumulation accounts are flow accounts that encompass all changes in the balance-sheet accounts between the beginning and the end of the accounting period. The accumulation accounts consist of the capital account, the financial account, and the other changes in assets account, which is divided into the revaluation account and the other changes in the volume of assets (OCVA) account. Flow of funds accounts—a subset of financial statistics—are transaction accounts that are linked to the other accumulation accounts and the balance-sheet accounts.

**8.5** The chapter then describes the presentation of financial statistics, which is in *matrices* or in *time-series* tables. The matrices contain sectoral presentations for one or more time period, whereas the time-series tables show the realizations over time for flows and outstanding stocks of individual financial assets and liabilities.

**8.6** Success in compiling financial statistics heavily depends on the quality of the *source data*. Because the availability of source data differs across countries, the chapter examines both *core data sources* and *supplementary data sources*. Core data for the financial statistics are available from the *Depository Corporations Survey (DCS)*, the balance of payments statistics, and central government records on a quarterly basis. This *Guide* recommends that *the financial statistics be compiled on a quarterly basis with a time lag of no more than 16 weeks*.

**8.7** The degree of complexity of compilation on a quarterly basis depends on country circumstances with respect to sectoral and financial instrument coverage and the level of sophistication of the financial statistics being compiled. However, compilation of financial statistics on a less frequent and/or less timely basis (for example, on an annual basis

and with a six-month or longer lag) would significantly diminish the policymaking usefulness of the data.

**8.8** Compilers are encouraged to apply the valuation and classification guidelines recommended for monetary statistics in this *Guide*, except for in special cases identified in this chapter. In compiling the financial statistics, several types of estimation procedures are needed. Hence, this chapter describes a diverse collection of estimation and compilation methods.

**8.9** At its core, this chapter illustrates *three levels of financial statistics*:

(1) *Basic flow of funds accounts* that are designed for a developing country that wishes to analyze intersectoral financial flows, but for which data sources are limited;

(2) A 1993 SNA-integrated financial account and corresponding balance sheet that fits the needs of an emerging-market country that already has the basic flow of funds accounts and that wishes to enhance the usefulness of the data for policy analysis, through introduction of stock data and flow data that have further disaggregation by economic sector and financial asset category; and

(3) *Detailed financial statistics* that are applicable for a country that has well-developed capital markets and that desires to have financial statistics that contain thorough coverage of all economic sectors and financial instruments specified in the methodology of the 1993 SNA.

**8.10** Because countries are at various stages of financial development and capabilities for compiling financial statistics, the chapter recommends that, as a starting point, compilers begin with the basic flow of funds accounts—the simplest form and level of financial statistics. These statistics can be compiled by allocating a minimum amount of resources and by using existing source data only.

**8.11** This chapter also describes (1) *estimation techniques* of missing data and (2) *editing, residual calculations, and discrepancies*. Numerical examples for the compilation of the financial statistics are provided in some of the tables in this chapter.

**8.12** Financial statistics have many benefits, including usefulness in revealing weaknesses in the underlying data for the various sectors. Being able to use financial statistics to identify and quantify discrepancies in the data across economic sectors is one of the most important outcomes for countries that are compiling the financial statistics for the first time.

**8.13** Another benefit is that the financial statistics link the financial activities of the nonfinancial sectors to those of the financial corporations (FCs) sector. Data on loans and capital market instruments such as securities show the extent to which countries use FCs and capital markets to obtain funds to finance economic activity. The data offer means for assessing the relative importance of various types of financing and for monitoring the changes in the sources of financing over time. The data indicate the sources of funds to FCs and other sectors. Forms of financial-asset accumulation—deposits, pension and life-insurance reserves, securities, etc.—are also identified. Financial statistics provide a means for examining the contribution of domestic and foreign sources of financing to a country's current expenditures and capital formation.

**8.14** Policymakers use financial statistics to analyze economic and financial developments within countries and to compare economic and financial developments among countries. For example, financial statistics as described in this *Guide* are an important input to the IMF's balance-sheet approach to analyzing a country's vulnerability to external or internal shocks. The financial account shows the flow of funds from net saving sectors to net borrowing sectors, channeled through intermediation in the financial sector or, to a lesser extent, through direct lending between the nonfinancial sectors. The financial statistics record the distribution and redistribution of financial assets and liabilities among the sectors of the economy on a quarter-by-quarter basis.

**8.15** A numerical example to illustrate the compilation of financial statistics in practice is provided at IMF.org ([www.imf.org/external/pubs/ft/cgmfs/eng/index.htm](http://www.imf.org/external/pubs/ft/cgmfs/eng/index.htm)). An electronic spreadsheet and accompanying documentation describe the linkages between the underlying data (direct source data and estimates) and the complete set of financial statistics.

## Definition, Scope, and Framework

### Definition and Scope of Financial Statistics

*Financial statistics consist of* a comprehensive set of stock and flow data on the financial assets and liabilities of all sectors of an economy. The financial statistics are organized and presented in formats designed to show financial flows among the sectors of an economy and corresponding financial asset and liability positions. (MFSM, ¶11)

The **scope of the monetary statistics** is limited to the assets and liabilities of the financial corporations sector and its subsectors. In contrast, the financial statistics encompass all financial stocks and flows among all sectors of the economy and between these sectors and the rest of the world. (MFSM, ¶405)

**8.16** Financial statistics are defined as a comprehensive set of stock and flow data on the financial assets and liabilities of all sectors of an economy. This *Guide* uses the term *financial statistics* rather than *flow of funds accounts* to avoid the ambiguity that results from the various forms of flow data. The set of *financial statistics*, which is broader than the *flow of funds accounts*, includes data on stocks, and separate categories of flows in the form of transactions and other types of flows. This *Guide* uses the term *flow of funds accounts* to refer to accounts for transactions only.

**8.17** The scope of the financial statistics is all financial stocks and flows among all sectors of the economy and between these sectors and the rest of the world. Chapter 3 indicates that, in addition to the FC sector, the total economy consists of the general government sector, nonfinancial corporations sector, and other resident sectors (households and non-profit institutions serving households, or NPISH). Data for the sectors' financial positions with units in the rest of the world are designated as claims on and liabilities to *nonresidents*, or as *foreign assets* and *foreign liabilities*. Sectors also have *subsectors*. The general government subsectors are the central government, state and local government, and social security funds (if classified separately). The nonfinancial corporations subsectors are public nonfinancial corporations and other nonfinancial corporations. (The sectors and subsectors are described more fully in Chapter IV of the 1993 SNA.)

**8.18** In addition to economic sectors, *financial assets* are basic building blocks for the financial statistics.

The major categories of financial assets, described in Chapter 4 of this *Guide*, are monetary gold and SDR holdings (central bank only), currency and deposits, securities other than shares, loans, shares and other equity, insurance technical reserves, financial derivatives, and other accounts receivable/payable.

### Framework for Financial Statistics

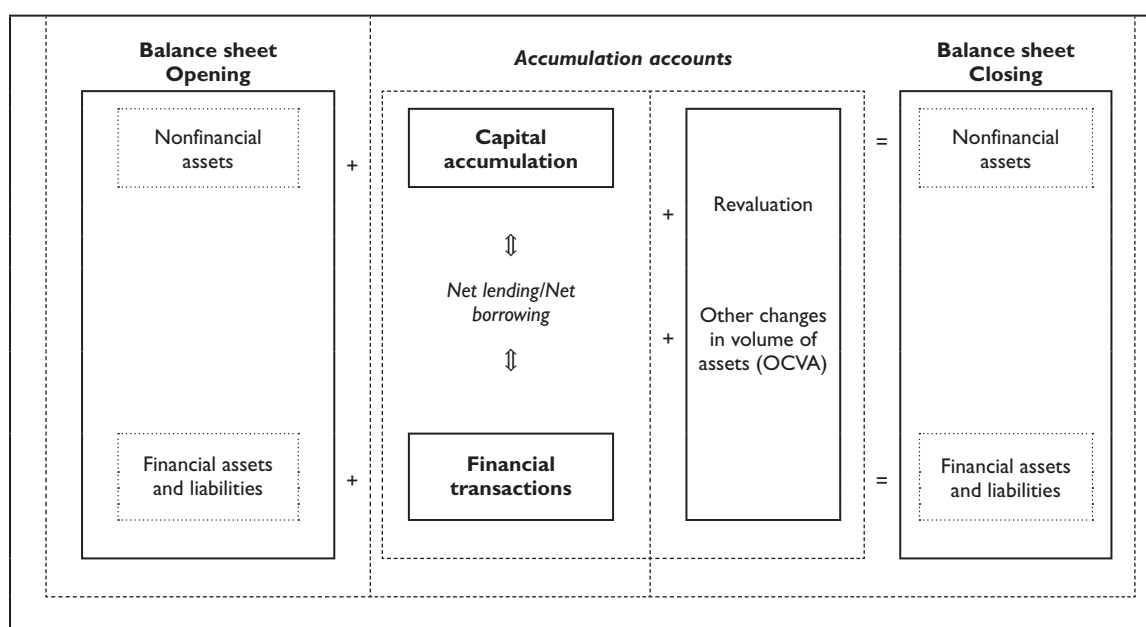
The **balance sheets and accumulation accounts** are the recommended framework for financial statistics because they provide an internationally recognized set of guidelines for integrating financial stocks and flows into a complete system of accounts. The balance sheets and accumulation accounts cover the transactions, other flows, and stock positions that are relevant for broad financial analysis. (MFSM, ¶421 and ¶422)

**8.19** The framework for financial statistics is the balance-sheet accounts and accumulation accounts in the 1993 SNA. The *balance-sheet accounts* cover stock positions of assets, liabilities, and net worth. The *accumulation accounts* consist of the *capital account*, *financial account*, and *other changes in assets account*, subdivided into the *revaluation account* and *OCVA account*. Box 8.1 provides a schematic view of the interrelationships among these accounts.

### Balance sheets

The *balance sheets* show stocks of nonfinancial and financial assets and liabilities on the date for which the balance sheet is compiled. The difference between total assets and total liabilities is net worth. For each group of assets and liabilities, and thus net worth, changes between the opening and closing balance sheets result from transactions and other flows recorded in the accumulation accounts. (MFSM, ¶418)

**8.20** The *balance sheets* are a database of time series that are built up from the source data to obtain the matrix of balance sheets for the sectors. For each time series, the database should identify the source, the matrix cell in which the data are included, and the manner in which the data are combined with other time series to produce the cell totals. The stored information usually includes greater detail than is required for compiling the matrix. The database can contain hundreds of categories and subcategories, depending on the level of disaggregation of the source data.

**Box 8.1. Relationship Between the Balance Sheets and Accumulation Accounts in the 1993 SNA**


**8.21** In some areas, however, the source data are less detailed or less timely than is required for the compilation of the financial statistics. In some cases, no direct source data exist, and the data must be estimated or otherwise derived, as described in later sections of this chapter. Most countries have little or no direct source data for other resident sectors (households and NPISH). Depending on the type of transaction, the direct source data for transactions and positions with the rest of the world (nonresidents) may be limited, compared with the data availability for domestic sectors.

**8.22** In such circumstances, compilers usually apply either of two techniques—*counterpart* data collection or *residual* data—to obtain data from balance sheets. Each technique applies the principle that every asset (other than monetary gold and SDRs at a central bank) must have a matching liability. The information that is stored in balance-sheet databases in greater detail than is required for compiling the matrix facilitates the exercise of control over the allocation of counterpart data and residual data. For example, for most tradable securities denominated in foreign currency, the rest of the world is treated as a residual category. To balance the accounts for each

category, countries should nominate for each sector in the matrix a statistician responsible for the methodology. Counterparts and residuals are discussed in greater detail in the *Source Data* section in this chapter (§8.66–8.79).

#### Accumulation accounts

**8.23** The accumulation accounts consist of the *capital account*, *financial account*, and *other changes in assets account*. Within the other changes in assets account are the *revaluation account* and the *OCVA account*.

#### Capital account and financial account

**The capital account** records acquisitions and disposals of nonfinancial assets as a result of transactions with other units or internal bookkeeping transactions linked to production (own account capital formation, changes in inventories, and consumption of fixed capital), and measures the changes in net worth as a result of saving and capital transfers receivable from abroad. The balancing item is net lending or net borrowing, depending on whether saving *plus* capital transfers is *less* than the net acquisition of nonfinancial assets. (*MFSM*, ¶417)

**Net lending/Borrowing** is the balancing item of the capital account, calculated as net saving *plus* capital transfers receivable *less* capital transfers payable *less* acquisition *less* disposals of nonproduced nonfinancial assets. The net resources available to an economy or sector from saving and net capital transfers that are not used for capital accumulation are the amount of resources available for net acquisition of financial assets, that is, net lending. Economies or institutional sectors with a surplus of resources (through saving and net capital transfers) over capital accumulation are net lenders. Economies or institutional sectors that have capital expenditures in excess of these resources are net borrowers. Changes in net worth arise from saving and capital transfers. (MFSM, ¶428)

**The financial account** records the acquisition and disposal of financial assets and liabilities, and shows how net lending or net borrowing from the capital account is reflected in transactions in these financial items. The financial account is the last account in the sequence of accounts recording transactions. (MFSM, ¶417)

The financial account shows financial transactions among institutional units and between institutional units and the rest of the world. Financial transactions cover all transactions involving change of ownership of financial assets, including the creation and liquidation of financial claims. (MFSM, ¶429)

To emphasize the fact that financial transactions can be directly measured, the term net financial investment is used to denote the balancing item of the financial account, calculated as net acquisition of financial assets less net incurrence of liabilities. (MFSM, ¶449)

Net financial investment is always equal in concept to net lending/borrowing. A statistical discrepancy can be shown that represents any difference between the recorded total for saving and capital transfers and recorded total net lending. The discrepancy can arise in practice because of gaps in coverage or mismeasurement of any of the items in the full sequence of accounts. (MFSM, ¶450)

**8.24** Compilers use the *capital account* to derive the statement of sectoral net lending or net borrowing, which is the typical starting point for compiling the financial statistics. Net lending or net borrowing is the balancing item of the capital account, equating saving and capital transfers with a sector's net acquisition of nonfinancial assets.

**8.25** The *financial account*—the core of financial statistics—shows how the sectors allocate their excess funds (net lending position) or meet their

financing requirements (net borrowing position). The financial account shows that part of each sector's accumulation accounts that consists of *transactions* in financial instruments—the net acquisition of financial assets and the net incurrence of liabilities. In the financial account, the difference between the net acquisition of financial assets and net incurrence of liabilities is referred to as *net financial investment*. Although calculated separately by using the data in the financial account, net financial investment is conceptually equivalent to net lending or net borrowing in the capital account. In practice, independent compilation in the capital account and financial account contexts results in a discrepancy. Dealing with the discrepancy is discussed in the *Statistical Discrepancies* section of this chapter.

**8.26** As in assembling balance sheets, compilers assemble financial accounts from a database of time series, which is built up from the source data to obtain a matrix of financial transactions by sector, which constitutes the financial account. For each time series, the database should identify the source data, the sectoral matrix cell in which the data belong, and the manner in which the data are combined with other series to produce the cell total.

**8.27** *Financial transactions* measure the net acquisition of financial assets or the net incurrence of liabilities for each type of financial instrument. Some sectors are net lenders, while others are net borrowers. All financial transactions involve (1) simultaneous creation or liquidation of a financial asset and a counterpart liability, (2) conveyance of ownership of a financial asset, or (3) incurrence of a liability. A financial asset of one unit is matched by a liability of another unit (except in the case of monetary gold or SDRs).

**8.28** A financial transaction increases the net lending/borrowing by one institutional unit and, by the same amount, decreases net lending/borrowing by another unit. Therefore, the financial account shows how a deficit sector finances its net borrowing by reducing its assets and/or incurring liabilities. Sectors with surplus funds provide financing to other sectors, by acquiring assets (for example, by making loans, adding to deposit accounts or purchasing securities) or by reducing their liabilities.

**8.29** The financial account provides a complete set of financial transactions for each sector. In principle,



flows into and out of each sector should exactly balance, with net total financial transactions for each sector in the financial account equaling the financial net lending/borrowing for that sector in the capital account. In practice, statistical adjustment items are needed to absorb the errors and omissions in the accounts. Compilers will find that the size of the statistical adjustment items and their period-to-period variation are helpful for assessing the quality of the statistics. Large adjustment items may indicate that new source data and/or improvements in methodology are needed.

**8.30** In addition to the capital account and financial account, the accumulation accounts include the other changes in assets account, which contains two sub-accounts—the revaluation account and the OCVA account.

***Other changes in assets account: revaluation account and other changes in the volume of assets account (OCVA)***

The **revaluation account** shows changes in net worth arising from holding gains and losses on nonfinancial assets, financial assets, and liabilities resulting from changes in the prices of the various assets and liabilities. (*MFSM*, ¶417)

The **OCVA account** shows changes in net worth arising from all factors other than transactions as recorded in the capital and financial accounts and holding gains/losses as recorded in the revaluation account. (*MFSM*, ¶417)

**8.31** The revaluation account and OCVA account complete the linkage between the period-to-period flows and the stocks recorded in the balance-sheet account. That is, the change in the stock of an assets or liability category is the sum of the transactions, revaluations, and OCVA for a given period.

***Flow of funds accounts***

*Flow of funds data*, presented in a matrix form showing the financial transactions among all subsectors of an economy, are a particular focus of the financial statistics described in Chapter VIII of this manual. (*MFSM*, ¶12)

Flow of funds statements sometimes cover both financial and capital transactions, thereby providing a link to the capital account of the 1993 SNA. Parallel stock

presentations can also accompany flow of funds statements. (*MFSM*, ¶408)

Flow of funds accounts are sectoral accounts, and, while these accounts place an emphasis on FCs because of their important role in financial activity, they also attach due consideration to the financial activities of other institutional sectors. Flow of funds accounts had their origin as a separate statistical system but are now commonly linked to the nonfinancial economy by their integration within the national accounting framework, particularly through associating financial data with data on saving and capital formation. Flow of funds are transactions accounts, but they are often linked to balance sheet accounts and are prepared in conjunction with accounts of stocks of financial assets and liabilities of each institutional sector. (*MFSM*, ¶439)

Flow of funds accounts exist in various forms that differ according to the analytical needs that are being addressed and by the complexity and detail of the accounting presentation and data requirements. The simplest flow of funds accounts identify financial transactions of major importance between sectors at an aggregated level. The most complex flow of funds accounts consist of a three-dimensional matrix that relates the creditor sector, the debtor sector, and the financial asset used in the transaction. The preparation of basic flow of funds accounts is within the capabilities of all countries that have reasonably complete systems of balance of payments, government finance, and monetary statistics. (*MFSM*, ¶440)

Flow of funds accounts that follow the form of the 1993 SNA financial account can, of course, be fully integrated with capital account transactions and with sectoral and national balance sheets. (*MFSM*, ¶442)

**8.32** The *MFSM*, which defines the flow of funds accounts as transactions accounts, indicates that flow of funds accounts often are prepared in conjunction with the compilation of the stock data for financial assets and liabilities of each economic sector. In addition, the *MFSM* notes that the scope and presentation of flow of funds accounts may take various forms. Compilers may present them in a matrix that shows the financial and capital account entries for each sector, which is accompanied by a parallel matrix that shows the stocks of assets and liabilities for the respective sectors. As for scope, the *MFSM* describes simple accounts (which show the financial transactions between sectors at an aggregated level) and complex accounts (which show three-dimensional flows from creditors to debtors for each type of asset). Flow of funds accounts can and often do

follow the form of the *1993 SNA* financial account, and compilers are able to integrate the financial account with the capital account and with the sectoral and national balance sheets.

**8.33** Though countries use the term *flow of funds accounts* in practice, the term seldom refers to a separate and distinct system of financial statistics. National compilers, including those in different data-collection agencies, usually integrate the various components of flow of funds accounts with other accounts in the national accounts system, which includes integration with the data for a country's current accounts and international transactions accounts. The integration is based on the broad framework of the *1993 SNA*.

### Presentation

**8.34** The two most common presentations of financial statistics are matrices with sectors and instruments for a particular time period and sector statements for multiple time periods. In addition, time-series tables can be prepared to show the transactions and positions for individual financial instruments.

**8.35** The information potential for a country's financial statistics presents both opportunities and presentational issues. Striking a balance between providing sufficiently detailed data and efficiently conveying information to various users is challenging, particularly given that different users prefer alternative presentations. Substantial detail in tables may hinder a user's ability to extract the desired information or to uncover trends and other relationships that may be of interest. However, analytically useful information in more detailed data may be eliminated if the tables are overly condensed.

### Matrix Formats

**8.36** Matrices can be prepared for (1) transactions, (2) stocks, and (3) other flows. The two-dimensional matrix of the flow of funds can be constructed for one period or several time periods. Less commonly, the flow of funds accounts are presented in a more detailed form that is three-dimensional.

### Basic flow of funds account

A basic flow of funds account is a modified form of the flow of funds matrix that employs a reduced num-

ber of sector and financial asset categories. The sectors chosen are normally those most important for financial analysis and for which data are available—remaining sectors are placed in a residual category. Countries that prepare macroeconomic accounts covering monetary statistics, government finance data, and the balance of payments can construct the basic accounts. Therefore, countries that have limited statistical resources can nevertheless benefit from compiling a set of interrelated and internally consistent sectoral accounts that are useful for analytic and policy purposes. (*MFSM*, ¶453)

**8.37** Basic flow of funds accounts are shown in modified forms of flow of funds matrices—in Table 8.1 (transactions) and Table 8.2 (stocks). The rows and columns of each matrix show data for a single period.

### Transactions matrix

**8.38** In the *transactions matrix*, each sector has two columns—one for uses of funds and one for sources of funds. If the transactions matrix contains the full statement of flows for a sector, including investment in nonfinancial assets, the sum of all columns for uses of funds for each sector conceptually equals the sum of all columns for sources of funds. The rows of the transactions matrix are the financial instruments that represent the uses and sources for the respective sectors. A financial instrument may be both a source and a use for an individual sector, for example, when a sector both issues and holds equity shares. For each financial instrument, the sum of sources across sectors conceptually equals the sum of uses across sectors. If the identities do not hold because of data limitations, the matrix would show discrepancies between uses and sources for sectors and instruments.

**8.39** The example in Table 8.1 shows that shares and other equities (row D) were both a use and a source for FCs. That is, in the first quarter of 2003, FCs had a net share purchase (uses column) in the amount of **370**. In the sources column, FCs had a net issuance of **-601**, meaning that FCs retired equity in the amount of **601**.

### Stock positions matrix

**8.40** The *stock positions matrix* summarizes the financial assets and liabilities in the sectors' balance sheets. Each sector is represented by two columns—one for assets and one for liabilities, corresponding to

Table 8.1. Summarized Financial Statistics Matrix: Transactions

Transactions 1st quarter 2003	Financial Corporations		General Government		Nonfinancial Corporations		Other Residents		Rest of the World		Total	
	Uses	Sources	Uses	Sources	Uses	Sources	Uses	Sources	Uses	Sources	Uses	Sources
A. Gold and SDRs	-9	0	0	0	0	0	0	-9	0	-9	-9	-9
B. Currency and deposits	-10,360	763	5,498	0	-1,317	0	820	0	251	-5,871	-5,108	-5,108
C. Securities other than shares	5,097	0	112	5,078	14	705	0	0	7	-553	5,230	5,230
D. Shares and other equities	370	-601	335	0	-640	393	-275	0	8	6	-202	-202
E. Loans	-9,683	-52	0	-14	299	-4,928	0	-4,844	-154	300	-9,538	-9,538
F. Insurance technical reserves	0	894	0	0	0	0	752	0	142	0	894	894
G. Financial derivatives	0	0	0	0	0	0	0	0	0	0	0	0
H. Other accounts receivable/payable	3,114	0	0	0	5,457	0	0	0	365	6,133	6,133	72
Subtotal	-14,274	1,004	5,945	5,064	3,813	-3,830	1,297	-4,844	619	6	-2,600	-8,661
Net financial investment		-15,278		881		7,643		6,141		613		6,061

the uses and sources of funds. The rows of the stock positions matrix are the financial instruments. The example in Table 8.2 shows a heavy reliance of the other residents sectors (households and NPISH) on deposits (row B) relative to investment in financial assets such as equity shares (row D). In the example, nearly half of the FCs' loans were liabilities of other FCs (row E), and nearly a third of the FCs' loans were liabilities of nonfinancial corporations.

### Other flows matrix

**8.41** The *other flows matrix* is used to record revaluations and OCVA, which bridge the gap between transactions and period-to-period changes in stock positions. For each sector, the other flows matrix has two columns for other changes in assets and liabilities, respectively. The rows of the other flows matrix are the financial instruments. Table 8.3 provides an example of an other flows matrix.

### Uses of the matrix presentation

**8.42** The matrix presentation is particularly useful in that, taken together, the transactions, other-flows, and stock-position matrices specify the identities that must be satisfied for each sector and each instrument. The matrix format facilitates the immediate identification of intersectoral inconsistencies that can be investigated and corrected by the compilers. The matrices show the significance of the various categories of financial instruments relative to the overall amount of period-to-period changes in the uses and sources of funds for each sector and the entire economy.

**8.43** In addition to having data for a specific period, compilers and users can use the sets of matrices for several time periods to trace the impact of trends such as a sector's changing preferences for particular financial instruments. That is, the matrix presentation specifies that a new financial instrument must be a substitute for the utilization of existing types of financial instruments, or must be financed from additional resources.

**8.44** The two-dimensional matrix does not allow compilers and users to identify counterpart sectors. For example, net purchases of shares and other equity by other resident sectors (Table 8.1, row D) amounted to **-275**, and the other resident sectors' holding of shares and other equities (Table 8.2, row D) amounted to **14,995**. The stock position matrix shows that all outstanding shares and other equity (Table 8.2, row D) were issued by FCs, nonfinancial corporations, and the rest of the world. However, the stock position matrix does not reveal the extent to which the other resident sectors' holdings are separately attributable to equity issuances of FCs, nonfinancial corporations, and the rest of the world.

### Detailed flow of funds matrices

The SNA financial account may be expanded into a three-dimensional matrix to track financial transactions between source and user sectors and the financial asset used in the transaction. It therefore shows who finances whom and by means of which financial asset. Because

Table 8.2. Summarized Financial Statistics Matrix: Stock Positions

Stock Positions End of March 2002	Financial Corporations		General Government		Nonfinancial Corporations		Other Residents		Rest of the World		Total	
	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
A. Gold and SDRs	895	0	0	0	0	0	0	0	0	0	895	0
B. Currency and deposits	67,373	188,385	50,073	0	20,893	0	82,593	0	6,427	38,975	227,361	227,361
C. Securities other than shares	139,104	0	13,542	110,271	247	8,805	0	0	55	33,872	152,948	152,948
D. Shares and other equities	11,106	52,614	2,853	0	35,004	14,875	14,995	0	3,801	270	67,759	67,759
E. Loans	66,118	32,188	0	5,942	1,915	20,540	0	36,448	30,300	3,213	98,332	98,332
F. Insurance technical reserves	0	24,452	0	0	0	0	19,791	0	4,661	0	24,452	24,452
G. Financial derivatives	62	221	0	0	0	0	0	0	159	0	221	221
H. Other accounts receivable/ payable	8,257	9,815	0	0	3,272	190	0	0	1,022	2,545	0	0
Subtotal	292,915	307,675	66,468	116,213	61,331	44,410	117,379	36,448	46,425	78,875	571,969	571,072
Net financial position		-14,760		-49,745		16,921		80,931		-32,450		897

of the symmetrical nature of financial assets and liabilities, a single matrix could be constructed, insofar as one institutional unit's asset is another institutional unit's liability. (*MFSM*, ¶463)

**8.45** To overcome the analytical limitations of the two-dimensional format, the matrix presentation can be expanded into a three-dimensional structure that shows the counterpart data for transactions in each financial instrument. Three-dimensional financial statistics correspond to detailed flow of funds matrices, as described along with an example in the *MFSM*.<sup>1</sup> The presentation shows counterpart sectors, which are disaggregated by financial asset and liability categories.

**8.46** As the number of financial-instrument categories and subsectors increases, the three-dimensional structure may become cumbersome to maintain and to explain to users. This section describes a method for retaining selected elements of the three-dimensional structure, through separation of various matrices in the *detailed flow of funds matrix*.

**8.47** Some elements of the three-dimensional structure can be retained by combining two-dimensional tables. The concept is shown in Box 8.2. By slicing the three-dimensional structure, or cube, into several rectangles along the axis of own sectors, a set of two-

dimensional tables, with an axis for counterpart sectors and an axis for financial instrument categories, can be created.

**8.48** An example that retains elements of the three-dimensional structure is shown in Tables 8.4 and 8.5. Table 8.4 shows the FCs' transactions and positions with the various sectors identified in the columns. Table 8.5 shows the same types of data for nonfinancial corporations' transactions and positions. The own-sector data for FCs (Table 8.4) and nonfinancial corporations (Table 8.5) are those in the summary table. However, data for the counterpart sectors (for example, those for other resident sectors—households and NPISH) reveal the FCs' positions with each counterpart sector.

**8.49** In Table 8.4, the net transactions in FCs' equity shares from the other resident sectors during the period was **-314**, and the stock position of FCs' equity shares held by the other residents sector was **13,538**. In Table 8.5, the value of nonfinancial corporations shares purchased by the other residents sector was **38**, and the value of shares held by the other residents sector was **1,457**.

**8.50** Despite their usefulness for understanding the financial intermediation by FCs and other financial flows in an economy, the two-dimensional and three-dimensional matrix presentations often become too intricate for practical purposes. In addition, each matrix is limited to a single period.

<sup>1</sup>See the *Detailed Flow of Funds* section and Table 8.9 in the *MFSM*, Chapter VIII.

**Table 8.3. Summarized Financial Statistics Matrix: Other Flows**

Other Flows 1st Quarter 2003	Financial Corporations		General Government		Nonfinancial Corporations		Other Residents		Rest of the World		Total	
	Changes in assets	Changes in liabilities	Changes in assets	Changes in liabilities	Changes in assets	Changes in liabilities	Changes in assets	Changes in liabilities	Changes in assets	Changes in liabilities	Changes in assets	Changes in liabilities
	A. Gold and SDRs	37	0	0	0	0	0	0	0	0	37	37
B. Currency and deposits	642	-213	0	0	0	0	0	0	-213	642	654	654
C. Securities other than shares	5,842	0	0	-2	0	3	0	0	0	5,842	5,842	5,842
D. Shares and other equities	567	-6,622	-355	0	-4,055	1,080	-1,739	0	41	1	-5,541	-5,541
E. Loans	-292	0	0	0	0	-334	0	0	9	51	-282	-282
F. Insurance technical reserves	0	0	0	0	0	0	0	0	0	0	0	0
G. Financial derivatives	0	97	0	0	0	0	0	0	97	0	97	97
H. Other accounts receivable/payable	0	0	0	0	762	0	0	0	0	762	0	0
Subtotal	6,796	-6,738	-355	-2	-3,293	749	-1,739	0	-66	7,335	807	807
Net other flows		13,534		-353		-4,042		-1,739		-7,401		0

### Time-Series Presentations

**8.51** Time-series presentations of financial statistics can be compiled in various formats. Time-series presentations may focus on a single sector or combination of sectors, or on particular financial instruments.

### Sector tables

**8.52** Table 8.6 illustrates a truncated financial statistics account for other resident sectors (households and NPISH) for four time periods—2001, 2002, the fourth quarter of 2002, and the first quarter of 2003. The table shows a sequence of accounts—transac-

### Box 8.2. Concept of Three-Dimensional Flow of Funds Accounts

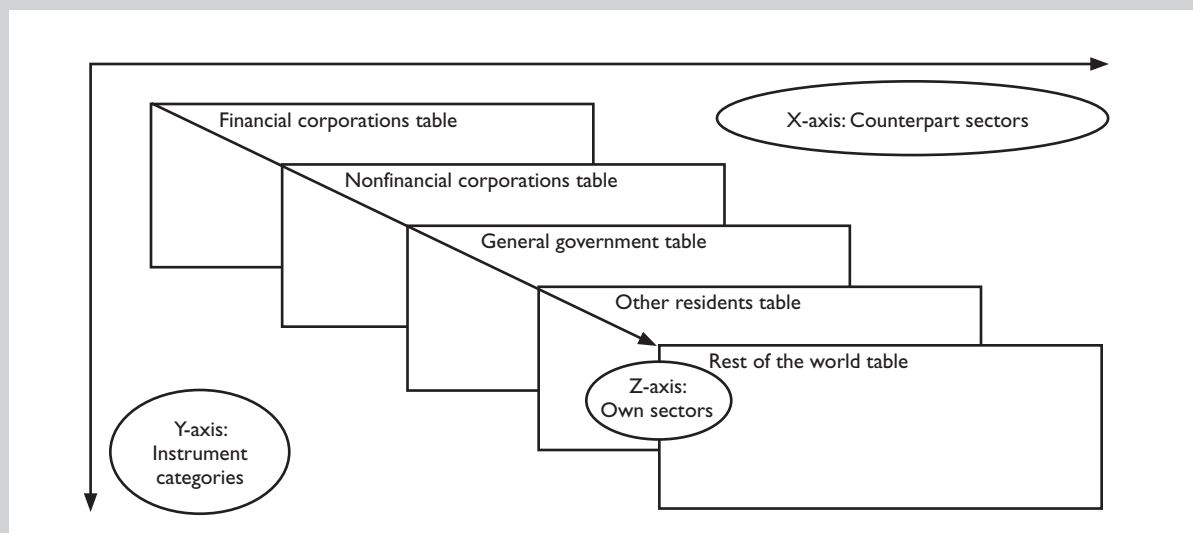


Table 8.4. Financial Corporations Table for Three-Dimensional Structure

Transactions	Financial Corporations		General Government		Nonfinancial Corporations		Other Residents		Rest of the World	
	Uses	Sources	Uses	Sources	Uses	Sources	Uses	Sources	Uses	Sources
<b>Ist quarter 2003</b>										
A. Gold and SDRs	-9	0	0	0	0	0	0	0	0	-9
B. Currency and deposits	-10,360	763	5,498	0	-1,317	0	820	0	-4,238	-10,360
C. Securities other than shares	5,097	0	0	4,960	0	704	0	0	0	-568
D. Shares and other equities	370	-601	335	0	-733	256	-314	0	111	114
E. Loans	-9,683	-52	0	-2	299	-5,262	0	-4,844	-351	425
F. Insurance technical reserves	0	894	0	0	0	0	752	0	142	0
G. Financial derivatives	0	0	0	0	0	0	0	0	0	0
H. Other accounts receivable/payable	3,114	0	0	0	4,957	0	0	0	-4,957	3,114
Subtotal	-11,471	1,004	5,834	4,958	3,206	-4,302	1,258	-4,844	-9,293	-7,284
Net financial position		-12,475		876		7,508		6,102		-2,009
Stock Positions	Financial Corporations		General Government		Nonfinancial Corporations		Other Residents		Rest of the World	
	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
<b>End of March 2003</b>										
A. Gold and SDRs	895	0	0	0	0	0	0	0	0	0
B. Currency and deposits	67,373	188,385	50,073	0	20,893	0	82,593	0	34,826	67,373
C. Securities other than shares	139,104	0	0	96,483	0	8,797	0	0	0	33,824
D. Shares and other equities	22,106	52,614	2,853	0	31,589	9,726	13,538	0	4,634	12,380
E. Loans	66,118	32,188	0	4,717	1,850	20,474	0	36,448	30,338	4,479
F. Insurance technical reserves	0	24,452	0	0	0	0	19,791	0	4,661	0
G. Financial derivatives	62	221	0	0	0	0	0	0	221	62
H. Other accounts receivable/payable	8,257	9,815	0	0	3,128	0	0	0	6,687	8,257
Subtotal	303,915	307,675	52,927	101,200	57,460	38,998	115,923	36,448	81,367	126,375
Net financial position		-3,760		-48,273		18,462		79,475		-45,008

tions, other flows (revaluations and OCVA), and end-of-period stocks—for the financial instrument categories of currency and deposits, shares and other equities, and insurance technical reserves.

**8.53** Table 8.6 shows that other resident sectors held **1,107** in shares of domestic nonfinancial corporations at the end of 2001 (row 26). In 2002, their net reduction of these shares amounted to **-31** (row 6). Other flows in 2002—assumed to have resulted from revaluations in a period when equity prices were rising—amounted to **237** in 2002 (row 16). At the end of 2002, the value of shares held (row 26) was **1,313** (= **1,107** - **31** + **237**).

**8.54** A stylistic feature of the construction of time-series versions of the sector tables is the propensity for mixing of different data frequencies in a single table, such as in Table 8.6, in which both annual and

quarterly data are shown. Compilers should take care in specifying the dates to ensure the correct interpretation. Stocks are specified as end-of-period amounts, meaning the amounts outstanding at the close of the markets on the last trading day of the year or quarter presented. Flows refer to those for an entire year or an entire quarter. Alternatively, the flows for a quarter can be multiplied by 4, to express the flows as annualized amounts. Annualizing the flow data enables users to compare the data of different frequencies. In the example, the 2003:Q1 amount of **38** for the other residents sectors' net purchase of shares could be shown as **152** at an annual "rate." Users could directly compare the annualized quarterly amount with the corresponding amounts for 2001 and 2002, which would indicate that the other residents sectors' net purchase of shares in the quarter exceed the average quarterly acquisition in the earlier years.

**Table 8.5. Nonfinancial Corporations Table for Three-Dimensional Structure**

Transactions	Financial Corporations		General Government		Nonfinancial Corporations		Other Residents		Rest of the World	
	Uses	Sources	Uses	Sources	Uses	Sources	Uses	Sources	Uses	Sources
<b>Ist quarter 2003</b>										
A. Gold and SDRs	0	0	0	0	0	0	0	0	0	0
B. Currency and deposits	0	-1,317	0	0	-1,317	0	0	0	0	0
C. Securities other than shares	704	0	0	0	14	705	0	0	0	14
D. Shares and other equities	256	-733	0	0	-640	393	38	0	99	93
E. Loans	-5,262	299	0	0	299	-4,928	0	0	334	0
F. Insurance technical reserves	0	0	0	0	0	0	0	0	0	0
G. Financial derivatives	0	0	0	0	0	0	0	0	0	0
H. Other accounts receivable/payable	3,551	8,499	0	0	5,457	0	0	0	-3,551	-3,042
Subtotal	-751	6,748	0	0	3,813	-3,830	38	0	-3,118	-2,935
Net financial position		-7,499		0		7,643		38		-183
<b>End of March 2003</b>										
A. Gold and SDRs	0	0	0	0	0	0	0	0	0	0
B. Currency and deposits	0	20,893	0	0	20,893	0	0	0	0	0
C. Securities other than shares	8,797	0	0	197	247	8,805	0	0	7	49
D. Shares and other equities	9,726	31,589	0	0	35,004	14,875	1,457	0	3,602	3,415
E. Loans	20,474	1,850	0	0	1,915	20,540	0	0	65	65
F. Insurance technical reserves	0	0	0	0	0	0	0	0	0	0
G. Financial derivatives	62	221	0	0	0	0	0	0	159	0
H. Other accounts receivable/payable	5,855	8,983	0	0	3,272	190	0	0	190	143
Subtotal	44,914	63,536	0	197	61,332	44,411	1,457	0	4,113	3,672
Net financial position		-18,622		-197		16,921		1,457		440

**8.55** Quarterly data for the financial statistics (and economic time series in general) are subject to seasonal variation. It is highly recommended that consideration be given, where possible, to the compilation of both unadjusted and seasonally adjusted data. Statistical techniques and issues related to seasonal adjustment are described in Chapter 6 of this *Guide*, where the focus is on seasonal adjustment of the monetary aggregates. However, the general principles and techniques also apply to seasonal adjustment of financial statistics.

#### **Instrument tables**

**8.56** Time-series presentations can also be used to summarize the financial activity in terms of the *financial instruments* underlying the sources and uses of funds. This type of presentation facilitates

users' analysis of trends in financial markets, given that time-series presentations show changes in the financial instrument composition of sectoral funding and reveal the sectors that are providing particular types of financing. Though the financial instrument tables do not contain complete representations—by financial instrument and by sector—of a particular sector's financing, the tables offer manageable and highly useful presentations of the sector's funding and financial investments.

**8.57** Table 8.7 illustrates a time-series presentation for shares and other equity for the same periods as those in the previous example. The transactions rows show net equity issuance and net equity purchases by sector. Only two sectors—FCs and nonfinancial corporations—and nonresidents (rest of the world) issue equity, but all sectors are pur-

**Table 8.6. Other Residents' Assets (Transactions, Other Flows, and Stock Positions)**

Year/Quarter	2001	2002	2002: Q4	2003: Q1
<b>Transactions (quarterly data at quarterly rate, not seasonally adjusted)</b>				
1 Currency and deposits	598	766	661	821
2 Bank notes and coins	152	98	139	-937
3 Other resident sector deposits	446	668	522	1,758
4 Shares and other equities	222	584	12	-276
5 Financial corp. shares	124	615	-55	-314
6 Nonfinancial corp. shares	98	-31	67	38
7 Insurance technical reserves	3,535	4,854	1,451	752
8 Insurance reserves for residents	1,542	1,960	596	444
9 Pension reserves	1,992	2,895	855	308
10 Subtotal	4,354	6,205	1,846	1,297
<b>Other flows</b>				
11 Currency and deposits	0	0	0	0
12 Bank notes and coins	0	0	0	0
13 Other resident sector deposits	0	0	0	0
14 Shares and other equities	-11	1,069	-17	-1,740
15 Financial corp. shares	-33	832	-45	-1,846
16 Nonfinancial corp. shares	22	237	28	106
17 Insurance technical reserves	0	0	0	0
18 Insurance reserves for residents	0	0	0	0
19 Pension reserves	0	0	0	0
20 Subtotal	-11	1,069	-17	-1,740
<b>End-of-period stocks</b>				
21 Currency and deposits	81,007	81,773	81,773	82,594
22 Bank notes and coins	11,870	11,968	11,968	11,031
23 Other resident sector deposits	69,136	69,804	69,804	71,562
24 Shares and other equities	15,359	17,012	17,012	14,996
25 Financial corp. shares	14,251	15,699	15,699	13,539
26 Nonfinancial corp. shares	1,107	1,313	1,313	1,457
27 Insurance technical reserves	14,185	19,039	19,039	19,791
28 Insurance reserve for residents	3,274	5,234	5,234	5,678
29 Pension reserves	10,911	13,805	13,805	14,113
30 Subtotal	110,550	117,824	117,824	117,381

chasers of equity. Net issuance for the economy as a whole is equal to net purchases for the economy as a whole plus nonresidents' net purchase of domestically issued shares. The end-of-period stock positions for all issuing sectors must equal the end-of-period stock positions for all holding sectors and nonresidents.

**8.58** In the example, equity holdings of nonfinancial corporations (row 28) are much larger than the nonresident holdings (row 30). In 2003:Q1, the nonfinancial corporations' sector net issuance of equity was relatively large (row 3), while the financial corporations sector retired more equity than it issued (row 2). The FCs were net purchasers of equity (row

6), and the nonfinancial corporations were net sellers in the period (row 8).

## Compilation Methods and Source Data

### Compilation Methods

**8.59** Conceptually, source data for the financial statistics can be obtained from both parties to each financial transaction/position. If compilers obtained data from both parties, they would have two independent observations—the creditor's record and the debtor's record—for each transaction/position. The two parties' data should be identical but, in practice,



**Table 8.7. Shares and Other Equity by Holding Sector (Transactions, Other Flows, and Stock Positions)**

Year/Quarter	2001	2002	2002: Q4	2003: Q1
<b>Transactions (quarterly data at quarterly rate, not seasonally adjusted)</b>				
1 Issuing sectors total	2,427	1,968	2,161	-201
2 Financial corporations	1,543	2,232	1,371	-601
3 Nonfinancial corporations	853	-300	777	393
4 Rest of the world	31	37	12	7
5 Holding sectors total	2,416	2,047	2,144	-201
6 Financial corporations	884	145	562	371
7 General government	18	-140	0	336
8 Nonfinancial corporations	1,295	1,359	1,558	-641
9 Other residents	222	584	12	-276
10 Rest of the world	-3	98	12	9
<b>Other flows</b>				
11 Issuing sectors total	-16	5,414	59	-5,561
12 Financial corporations	-20	3,056	27	-6,623
13 Nonfinancial corporations	2	2,360	28	1,061
14 Rest of the world	2	-11	4	1
15 Holding sectors total	-16	5,499	6	-5,561
16 Financial corporations	5	1,609	-2	568
17 General government	0	165	0	-336
18 Nonfinancial corporations	-35	2,502	24	-4,056
19 Other residents	-11	1,069	-17	-1,740
20 Rest of the world	25	154	1	3
<b>End-of-period stock</b>				
21 Issuing sectors total	66,141	73,523	73,523	67,761
22 Financial corporations	54,543	59,839	59,839	52,615
23 Nonfinancial corporations	11,361	13,421	13,421	14,875
24 Rest of the world	237	263	263	271
25 Holding sectors total	62,468	70,014	70,014	64,252
26 Financial corporations	8,414	10,168	10,168	11,107
27 General government	2,828	2,854	2,854	2,854
28 Nonfinancial corporations	35,839	39,701	39,701	35,004
29 Other residents	15,359	17,012	17,012	14,996
30 Rest of the world	27	279	279	291

often are not. Data collection costs often outweigh the benefits of data collection from both parties. Thus, compilers often need to rely on the data reported by only one party to a financial transaction/position, using the same data for the *counterpart* to the transaction/position.

### Counterparts

**8.60** For example, data for the financial transactions of other resident sectors (households and NPISH) can be obtained from the data reported by sectors that engage in financial transactions with other resident sectors. That is, compilers take advantage of

the fact that a sector with many transactors, such as other resident sectors, mainly channel the financial transactions through a sector with relatively few institutional units—in particular, the FC sector. The data for other resident sectors, as derived from FCs' records, are designated as *counterpart* data.

**8.61** To obtain these data, compilers use the framework in this chapter, basing compilation of financial accounts mainly on balance-sheet data of FCs, nonfinancial corporations, and government units. These data can be used to obtain the values of financial assets and liabilities for the data reporters and for the counterparts to the transactions.

**8.62** Compilers use *differencing*—subtraction of opening balance-sheet values from closing balance-sheet values—to estimate some transactions and other flows involving financial assets and liabilities. They use other data, such as those for write-offs and holding gains and losses, to distinguish transactions from other flows. In some cases, compilers are able to obtain or estimate transactions data directly from source data.

### **Residual calculations**

**8.63** When data cannot be obtained directly or from counterpart data, it may be possible to derive the data residually—using the identity that, for each category of financial instrument (other than monetary gold and SDRs), the sum of the net acquisitions (including those of the rest of the world) must equal the sum of the net incurrences of liabilities. If data are available for all but one sector, the net acquisition or net incurrence of liabilities by the remaining sector can be derived residually, using the identity.

**8.64** Estimates of stocks (levels) are made by collecting balance-sheet data from various sources and selecting those that are most reliable. Compilers sometimes must make a choice. For example, the government authorities may report data on most of their lending to state-owned nonfinancial corporations. Liability data for the same loans may be reported by the nonfinancial corporations themselves, as borrowings from the government. The two sets of data sometimes may not agree, because one side of the reporting—the government authorities or the nonfinancial corporations—may not have included data from all state-owned nonfinancial corporations. In this case, compilers can use the most comprehensive and reliable data to estimate both the asset and liability sides of these borrowings.

**8.65** In deriving financial transactions using the difference between closing and opening balance-sheet amounts, compilers need to extract the component of the period-to-period change that arose from valuation changes, caused by exchange-rate movements and/or changes in the market prices (or fair values) of financial instruments. For example, compilers can revalue the opening stock of foreign-currency-denominated securities (to be presented in national-currency units), using the market exchange rate at the end of the period. They can subtract the recalculated opening stock from the reported closing stock to obtain

an estimate of the value of the total flow (in national currency). They then can subtract the estimated value of transactions—obtained by dividing the total flow by the average exchange rate during the reference period (assuming no OCVA)—to derive the valuation change.<sup>2</sup> The compiler then examines the plausibility of these estimates and, if necessary, makes adjustments to them.

### **Source Data**

**8.66** The matrix presentation provides a means for understanding the *source data* and the general compilation procedures for financial statistics. The compiler focuses on a combination of aggregation and estimation of data arrayed by sector (moving vertically within the matrix) and allocation of financial instrument totals among the use (asset) and source (liability) categories of the sectors (moving horizontally within the matrix). Whether moving vertically or horizontally through the matrix, the compiler will need to make use of a variety of data sources.

### **Main source data**

**8.67** Using the data described in Table 8.8, compilers of financial accounts most commonly start by determining the stock positions for each sector (FCs, general government, nonfinancial corporations, and other resident sectors) and the rest of the world.

**8.68** Compiling data for the stock positions may or may not be straightforward. If balance-sheet data are available for most major sectors (FCs, general government, and nonfinancial corporations) and for the international investment position (IIP), the stock positions for the other resident sectors (households and NPISH) can be derived residually. However, the actual process is often less straightforward, because balance-sheet data for the general government sector, nonfinancial corporations, and the IIP are unavailable or are not sufficiently disaggregated.

**8.69** For countries in which data availability is very limited, compilation of the financial statistics is heavily dependent on the balance-sheet data for FCs, which are used for the counterpart data, as well as for the FC component of the financial statis-

<sup>2</sup>On the use of this estimation technique in the presence or absence of OCVA, see the section on *Estimation of Transactions and Valuation Changes from Exchange Rate Movements* in Chapter 5, ¶5.22–5.33, and Annex 5.1.

**Table 8.8. Types of Main Source Data**

Source	Possible Use
1. Balance-sheet data of financial corporations (including counterpart data)	Use for stock positions of the financial corporations sector. Obtain control totals for financial instruments such as deposits and loans and allocate them to counterpart sectors.
2. International investment position	Use for stock positions for the rest of the world.
3. Balance-sheet data for nonfinancial corporations	Use to derive the structure of the balance sheet and to obtain data on households' financing by nonfinancial corporations, such as trade credits.
4. Government debt data	Use as a benchmark in determining control totals for government debt categories, such as treasury bills.
5. Financial market/custodian data	Use for control total of financial instruments such as securities other than shares and shares and other equity, and allocate among issuing/holding sectors.
6. Financial account of balance of payments and government finance statistics	Use for transactions with the rest of the world and general government sectors, including counterpart sectors.
7. Market price indices (for example, share price index)	Use to convert book values into market values for financial instruments such as shares and other equity, in order to separate transactions from revaluations.

tics. The compilation starts with the preparation of cross-sections from the three-dimensional financial statistics matrices. Basic two-dimensional matrices are obtained by aggregating counterpart breakdowns into major financial instrument categories. This process is described as compilation of Level 2 financial statistics.

**8.70** Some countries also have limited availability of balance-sheet data for the nonfinancial corporations sector. Though this source is very useful for obtaining data for financial instruments such as trade credits, the data typically have shortcomings with respect to the coverage of institutional units, the level of detail for financial assets and liabilities, and the frequency and timeliness of the data. When the shortcomings are severe, compilers use the data

as benchmarks for estimating the sectors' stock positions.

**8.71** To fill gaps in the data for nonfinancial sectors, compilers can rely on obtaining *control totals* for financial assets and liabilities—in essence, moving horizontally across the three-dimensional matrix for the financial statistics. *Control total* refers to the total amount (stocks or flows) of a certain financial instrument issued and held. The compilers can obtain the data for control totals from the following sources:

- Balance-sheet accounts of the FCs (mainly for non-negotiable instruments such as deposits and loans);
- Government records for government debt; and
- Other sources, such as the records of financial market participants or custodians/security registration offices (mainly for negotiable instruments such as securities other than shares and shares and other equity).

**8.72** Compilers will find the horizontal approach particularly useful for financial instruments such as securities other than shares and shares and other equity, but they may find that the available data are not sufficient for a full allocation across all sectors. If the financial-markets data are not fully disaggregated by sector, the compilers will need to allocate the aggregate data among issuers and holders, using whatever multiple sources of data and ancillary information are available. Moreover, one sector will need to be designated as residual, thereby ensuring that the total value of the transactions or position in a financial asset/liability category is fully allocated across the entire economy.

**8.73** For the flow data, procedures are needed for estimating the amounts of transactions, revaluations, and OCVA. Data from the government finance statistics and the financial account of the balance of payments statistics are useful as direct source data for transactions, or for use in estimating transactions for the general government sector and the rest of the world, respectively. Securities price indices are most often used to estimate valuation changes for securities, when market values of the securities are unavailable. For categories of financial assets and liabilities that are not subject to revaluation and have not experienced OCVA, transactions can be calculated from period-to-period changes in stock positions.

### Supplementary source data

**8.74** Supplementary source data can be used to improve the data estimates and to fill gaps in the primary source data. Some types of supplementary data are described in Table 8.9. For example, compilers can use government survey data that are applicable to various sectors. Tax records provide useful data in countries in which confidentiality rules do not preclude the use of some such data for statistical purposes. Other useful data sources are trade associations for specific industries and markets, which normally are active in surveying their members and publishing data for their specific markets.

**8.75** Other private sources of data may include vendors—corporations that compile data for specialized markets or for consulting purposes. Securities rating agencies may be included among these vendor sources. Availability of vendor data to compilers may require specific contractual arrangements with these private sources. Publicly available financial statements—in particular, balance sheets and income statements of large corporations—are useful data sources for OCVA such as loan write-offs, but such data may be available only on an annual or semi-annual basis.

### Macro and micro source data

**8.76** Source data for the compilation of financial statistics are either macro (for an entire sector or an entire category of financial instrument) or micro (for specific institutional units or specific transactions). An example of macro data is a major category of other depository corporations' (ODCs') assets, such as total loans or the total amount of equity shares outstanding for the corporations listed on an exchange. Examples of micro data are those in the balance sheets and income statements of individual nonfinancial corporations and records for the issuance and redemption of individual securities. Compilers need to use estimation techniques to convert micro data into the aggregate data for the financial statistics, especially when micro data are available for only a sample of all units in a sector or for only part of the holdings of a particular type of financial instrument.

### Comparability of information

**8.77** When a wide variety of source data are used, compilers need to consider the extent to which the

**Table 8.9. Types of Supplementary Source Data**

Type	Possible Use
1. Special surveys	Data on nonfinancial sectors' financial activities such as household savings and borrowings, as well as business financing.
2. Tax records	Balance-sheet data of corporations and nonprofit institutions for use as benchmarks.
3. Trade association publications	Data on activities of other financial corporations (OFCs) and transactions for particular types of financial instruments, such as financial derivatives.
4. Private data vendors	Data on activities of particular financial market activities, such as asset securitization.
5. Profit and loss statements	Data on OCVA (such as loan write-offs) to be used in separating transactions from OCVA.

data are in accordance with the classification and accounting principles in the preceding chapters of this *Guide*. Compilers may need to adjust the data for reconciliation across sources; in fact, such adjustments usually are needed. Moreover, the quality of such adjustments has a significant impact on the usefulness of the financial statistics.

**8.78** Table 8.10 shows several types of adjustments that often are needed in reconciling the source data. The coverage of the source data may not exactly match the units in the sector for which the data are applicable. Data disaggregation with respect to counterpart sectors and/or financial asset and liability categories in source data may differ from those of financial statistics. Also, valuation of the financial assets/liabilities in the source data may not accord with the valuation rules in Chapter 5 of this *Guide*. Thus, compilers need to adjust the valuations in the source data. In addition, the source data may be recorded on a cash basis, necessitating adjustment so that the data are on an accrual basis.

### Discrepancies

**8.79** Compilers often must deal with a lack of data, but they sometimes may be confronted with multiple or overlapping sources of data for a financial instru-

**Table 8.10. Adjustments for Data Comparability**

Type	Reason for Adjustment
1. Coverage	For sectors, macro data may cover units that are not in a sector or may exclude some units in the sector. Micro data may not cover all transactions or positions or may include some transactions that belong in other categories of financial assets/liabilities.
2. Sectorization	Source data may differ from the sectorization used for the financial statistics, for example, when a subsidiary should be classified as an FC but, in the source data, is included in the nonfinancial corporations sector, along with the parent corporation.
3. Classification of financial instruments	Classification of financial assets and liabilities in source data may differ from the classifications for the financial statistics.
4. Time of recording	In the source data, transactions may not be recorded on an accrual basis. Time of recording of a transaction may differ for the two parties to the transaction.
5. Valuation	Source data (for example, for securities) may not be valued on the basis of current market price or fair value. Valuation of foreign-currency-denominated assets/liabilities may not be based on the appropriate foreign exchange rates.

ment or a sector. Conflicts arise when one source of data (for example, balance-sheet data) shows amounts that are appreciably different from those in another source (for example, financial markets data). Compilers must assess the relative quality of the data from the alternative sources, resolve the differences, or report the discrepancies.

### Dealing with Reporting of Imperfect Data

**8.80** In an ideal world, both parties to a transaction would accurately record the transaction at the same time, would use the same initial valuation and later revaluations, and would report the data on a timely

basis. Compilers would collect and compile the data, needing only to check to ensure the data match and to eliminate transcription errors, etc. Such a system is clearly not feasible, but is a useful conceptual benchmark. In reality, the data may not match across reporters and may be prone to errors. Compilers often need to deal with data reporting that is inconsistent, partial, or indirect, as well as with the absence of data reporting.

### Inconsistent reporting

**8.81** When both parties report a transaction, several types of errors may occur and thereby introduce a data inconsistency. The parties may use different methods for the valuation of transactions or positions, different timing for recording transactions, or different classifications by type of transaction or by sector of the counterpart.

**8.82** An example is the positions arising from interbank transactions. Suppose all ODCs report the amounts of their claims on and liabilities to other ODCs. The net balance—total interbank claims *less* total interbank liabilities—should be zero, but often is not. Compilers must adjust the data to overcome the discrepancy.

**8.83** Another example is the data for local government. ODCs report data for deposits by, and lending to, local government. Suppose the local authorities also provided data on ODC loans and deposits. The figures may not agree for reasons such as time-of-recording differences or more unusual reasons, such as the local government accounts not being compiled on a strictly calendar-quarter basis.

### Partial reporting

**8.84** For many matrix cells, only one primary source of data exists. In some cases, the primary data—for example, data on net issues of government securities—may be complete and of high quality. In other cases, only partial data may be available, because the data are from a survey that covers only a subset of the units in a sector or the response rate of data reporters is less than 100 percent.

**8.85** Errors may occur when data are obtained from sample surveys. Suppose a survey covers only a subset of all financial cooperatives. The compiler's first task is to identify financial cooperatives. If the

financial cooperatives are too numerous, it may be necessary to obtain data from only the largest ones. Of those cooperatives, only a subset may respond on a timely basis. Using whatever data are reported, the procedures for grossing up from the sample data to the estimated data for all financial cooperatives can compound the data measurement errors.

**8.86** For the rest of the world, partial data in the form of custodial holdings of securities may be available. These data provide a lower bound (minimum amount) to be used in estimating the total securities holdings.

**8.87** Data may also be partial because of the impracticality of requiring that the reporter provide the detailed data that would be ideal for the financial statistics. Compilers may find that, in principle, some types of transactions data should be divided between two or more lines in the financial matrix. However, the additional reporting burden that would arise from requiring the detailed data often cannot be justified.

#### **Indirect reporting**

**8.88** Indirect reporting occurs in two forms. One form occurs as the absence of data directly from a sector. In this case, compilers obtain more detailed data from the counterpart sector. This case is particularly applicable to data for nonfinancial corporations and households/NPISH sectors. The other form of indirect reporting arises when balance-sheet data for the beginning and end of the period are used as the basis for estimating the net transactions within the period. Factors such as changes in the relevant population, changes in valuations, and OCVA such as write-offs are considered in the estimation.

**8.89** Compilers usually derive transactions in deposits and loans from stocks, given that deposits and loans are recorded at book values. For loans and deposits denominated in national currency, the transactions are equal to the period-to-period changes in the stocks less OCVA. For loans and deposits denominated in foreign currency, period-to-period changes in the stocks must be decomposed into separate estimates of transactions and valuation changes arising from variations in exchange rates. Compilers may need to make assumptions about the proportions of loans or deposits denominated in various foreign currencies and the average exchange rate at which the transactions denominated in these currencies took place.

#### **No reporting**

**8.90** No direct or indirect data may be reported for some types of financial transactions. Hopefully, information will occasionally become available to provide some indications of the outstanding stocks or flows for these financial assets/liabilities. Examples are transactions in trade credit or loans from the nonfinancial corporations sector to households and transactions between other resident sectors (households and NPISH) and the rest of the world. In such cases, compilers may need simply to omit the transactions from the accounts and admit to a lack of coverage in the data.

#### **Main sources and residual sectors**

**8.91** The major data sources contain much of the data needed for the financial statistics, but do not cover the transactions that do not pass through the financial system—in particular, transactions for which both parties and counterparties are nonfinancial corporations or other resident sectors (households and NPISH) and transactions of these sectors with the rest of the world.

**8.92** To incorporate some of the transactions conducted with the rest of the world, a survey of major nonfinancial corporations may be implemented to obtain data on balance of payments flows such as those from direct foreign investment.

**8.93** To ensure that asset transactions equal liability transactions across each row, compilers may designate one or more sectors as the residual sector(s). Any errors and omissions for a particular row are allocated to the residual sector(s). If more than one residual sector exist, each of these sectors is allocated a proportion of the total residual amount, based on the best information available to compilers.

#### **Systematic Development**

**8.94** Countries need a wide range of source data and methods to compile the full range of financial statistics. Given differences in source data availability across countries, a single level and presentation of financial statistics is not applicable to all countries. This chapter describes compilation methods and issues for three levels of accounts.

- *Basic flow of fund accounts*, which are designated as *Level 1 financial statistics*. Developing coun-

Table 8.11. Levels of Financial Statistics

Characteristics	Level 1	Level 2	Level 3
1. Use of flow and stock data	Shows flows only; relies on changes in stocks where flow data are not available.	Shows both flows and stocks; relies heavily on period-to-period changes in stock positions for compilation of flows.	Shows both flows and stocks; reconciles stock and flow data using accounts for revaluations and OCVA.
2. Accounting entries	Double entries arranged in one column: source (inflow) is positive, and use (outflow) is negative.	Quadruple entries arranged in two columns: both sources and uses shown for each sector.	Quadruple entries arranged in two columns: both sources and uses shown for each sector.
3. Sector detail	Four sectors: central government, depository corporations (DCs), private sector, and rest of the world.	Expanded domestic sector coverage to include state and local government, social security funds, nonfinancial corporations, and other residents (household and NPISH). Financial sector expanded to include DCs and other financial corporations (OFCs).	Full set of sectors in line with the 1993 SNA and MFSM, including separation of households and NPISH and expanded detail for financial intermediaries.
4. Instrument detail	None. Only total transactions shown.	Most basic categories, including currency and deposits, securities other than shares, shares and other equity, loans, financial derivatives, and insurance technical reserves.	A wide range of traditional instruments plus details of financial derivatives (forward-type and option-type) and new financial instruments such as structured financing products.
5. Source data	Relies almost exclusively on aggregate data from the DCS and balance of payments statistics.	Relies substantially on balance-sheet data for FCs, supplemented with data from the general government, IIP, and capital market sources.	A wide variety of sources, including (but not limited to) reports from government and regulatory agencies, capital market and trade publications, and special surveys of households and corporations.

tries that have limited sources of data may use these statistics for analyzing intersectoral financial flows.

- *The 1993 SNA-integrated financial account and financial balance sheet*, which are designated as *Level 2 financial statistics*. Emerging market countries are likely to develop these statistics after they already have the Level 1 statistics and wish to enhance the analytical content by incorporating interactions among a larger group of sectors and a more detailed set of financial instruments.
- *Detailed financial statistics matrices*, which are designated as *Level 3 financial statistics*. Countries that have well-developed capital markets may wish to expand their financial statistics to delineate each sector and each category of financial instruments in the 1993 SNA. The Level 3 financial statistics can be integrated with other components of the national accounts statistics, such as the production and income accounts.

**8.95** Table 8.11 describes the basic differences in the stock/flow data in financial statistics at Level 1, Level 2, and Level 3. The Level 1 statistics are flow data only. The source data for Level 1 may include reported data for transaction flows, but period-to-period changes in stocks are usually used to estimate the transactions. Level 2 statistics contains both flow and stock data, which are compiled with heavy reliance on stock data for the calculation of flows and, where possible, with separate estimates of transactions, valuations changes, and OCVA. Level 3 statistics provide a more detailed decomposition and reconciliation of stock/flow relationships, using data on changes in market values (or fair values) of financial assets/liabilities and OCVA data.

**8.96** The accounting entries for inflows and outflows among sectors in Level 1 differ from the entries for Level 2 and Level 3. Level 1 uses a double-entry system and a single column for each sector. The outflows and inflows in the single

column are distinguished by using positive entries to represent increases in financial resources and negative entries to represent decreases in financial resources. Level 2 and Level 3 use a quadruple-entry system and two columns for each sector, thereby distinguishing the uses from the sources. Each transaction results in four entries to the system. For example, if a household purchases a newly issued bond directly from a governmental unit, entries are made to show (1) an increase in other resident sectors' bond holdings, (2) a reduction in other resident sectors' cash holdings, (3) an increase in the general government sector's cash holdings, and (4) an increase in general government sector liabilities in the form of bonds.

**8.97** Moving from Level 1 to Level 3, the presentation is enhanced by progressively more disaggregation by sector and financial instrument. The example of Level 1 statistics, in the next section, contains four sectors—central government, private sector, depository corporations (DCs), and rest of the world. In particular, separate sectors for nonfinancial corporations and other resident sectors (households and NPISH) are not specified, and the data are not disaggregated by financial asset/liability category. For the Level 2 example, the financial statistics are expanded to include separate identification of additional sectors and subsectors—central bank, ODCs, OFCs, state and local government, social security funds, public nonfinancial corporations, other nonfinancial corporations, and other resident sectors. Level 2 also incorporates detail for financial assets/liabilities categories. Level 3 shows all sectors that are present in the full integration of the financial statistics and the nonfinancial components of the national accounts statistics; additional subsectors and financial instruments are separately specified in the example for Level 3.

**8.98** The source data need to be expanded substantially in moving from the Level 1 statistics to the higher levels. For Level 1, only aggregate data from the nonfinancial national accounts, central government, balance of payments statistics, and the DC component of the monetary statistics are used. For Level 2, comprehensive balance-sheet data for FCs, which include disaggregation by counterpart sector and financial asset/liability category, are used. The data in the IMF's standardized report forms are the source for the balance sheets of the subsectors of the FC sector, as described in Chapter 7 of this

*Guide*. The Level 2 statistics also make use of IIP data and capital-markets data for government securities and corporate shares, as supplementary sources. For Level 3, balance-sheet data for FCs are still a basic source, but the source data are augmented by capital-markets data and balance-sheet data for the nonfinancial sectors.

## Structure

### Basic Flow of Funds Account (Level 1 Financial Statistics)

A **basic flow of funds account** is a modified form of the flow of funds matrix that employs a reduced number of sector and financial asset categories. The sectors chosen are normally those most important for financial analysis and for which data are available—remaining sectors are placed in a residual category. (*MFSM*, ¶453)

### Overview

**8.99** Table 8.12 shows a matrix of a basic flow-of-funds account (Level 1 financial statistics). The Level 1 financial statistics have relatively few sectors and transactions components.<sup>3</sup>

**8.100** The economy is divided into domestic sectors and the rest of the world. The domestic sectors are disaggregated into the central government sector, private sector, and DC subsector. The private sector is the residual sector, which includes the households, NPISH, nonfinancial corporations, OFCs, and state and local government.

**8.101** The Level 1 statistics may also include non-financial economic activities—using data from the *1993 SNA* current account and capital account and referred to as *above-the-line components*—along with financial activities, or *below-the-line components*. Table 8.12 could include *above-the-line flows* such as disposable income, final consumption expenditures, net capital formation, exports, and imports. These data are used to obtain a measure of each sector's net lending or net borrowing. This more com-

<sup>3</sup>Tables 8.7 and 8.8 of the *MFSM* and Table 8.1 of this *Guide* are also basic flow-of-funds accounts that can be used as a reference. However, the Level 1 account in this *Guide* has the advantages of relative simplicity and significant analytical usefulness.



Table 8.12. Level I Financial Statistics Matrix

Transactions	Sectors				Sum
	Domestic economy			Rest of the world	
	Central gov.	Private sector	Depository corp.		
1. Net lending (+)/borrowing (-)	$NLNB_g$	$NLNB_p$	0	$NLNB$	0
2. External financing					
2.1. Foreign direct investment		$+FDI_p$	$+FDI_{odc}$	$-FDI$	0
2.2. Increase in external liabilities	$+NFB_g$	$+NFB_p$		$-NFB$	0
2.3. Increase in net external assets			$-\Delta NFA$	$+\Delta NFA$	0
2.4. Of which: net international reserves of the central bank			$-\Delta NIR$	$+\Delta NIR$	
3. Domestic financing					
3.1. Change in domestic credit	$+\Delta DC_g$	$+\Delta DC_p$	$-\Delta DC$		0
3.2. Change in broad money		$-\Delta BM$	$+\Delta BM$		0
3.3. Other domestic financing	$+ODF$	$-ODF$			0
4. Net errors and omissions	0	$+OIN_p$	$+OIN_{dc}$	$+OIN$	0
5. Sum	0	0	0	0	

Note: Inflow and outflow of funds are shown in a single column for each sector. The plus and minus signs indicate inflows (increases in resources) and outflows (decreases in resources), respectively. The sum in each column or each row of the matrix is always equal to zero.

$NLNB$	Net lending/borrowing	The difference between net saving and net investment; that is, the excess of funds available to lend if saving exceeds investment, or the amount borrowed if investment exceeds saving.
$FDI$	Foreign direct investment	Net change in inward and outward foreign direct investment.
$NFB$	Net foreign borrowings	Net change in foreign borrowings.
$\Delta NFA$	Net foreign assets	Net acquisition or disposal of foreign assets of DCs.
$\Delta NIR$	Net international reserves	Change in net international reserves.
$\Delta DC$	Domestic credit	Change in loans and other credit extended by DCs.
$\Delta BM$	Broad money	Change in deposits and similar liabilities of DCs.
$ODF$	Other domestic financing	Change in securities, loans, and other credit between the private sector and the central government.
$OIN$	Net errors and omissions (Other items net)	Balancing item that is the difference between $NLNB$ and the sum of external financing and internal financing.

plete version of Level 1 financial statistics could be compiled on an annual basis only, unless above-the-line data for net lending/borrowing were available on a quarterly basis. However, the analytical focus of the Level 1 statistics is on explaining the sectors' allocations of their net lending/borrowing through changes in their financial assets/liabilities in the below-the-line items.

**8.102** Table 8.12 illustrates that the Level 1 account is a zero-sum matrix, meaning that each row and each column sums to zero. For the sector identities in the columns, a positive entry represents an increase in financial resources. A positive entry in line 1 (net lending) indicates that the sector increased its financial resources from the production process. A positive entry in the lower part of the table (domestic and external financing) indicates that the sector obtained financial resources by reducing its financial assets or increasing its liabilities.

**8.103** Negative entries indicate reductions in sectors' financial resources. A negative entry in line 1 (net borrowing) means the sector's spending exceeded its net income from production. A negative entry below line 1 shows that the sector provided funds by increasing its financial assets or reducing its liabilities. The rows in the table also sum to zero. This is ensured by using contra-entries when direct source data are not available. In that way, all totals are fully allocated among the sectors.

**8.104** Table 8.12 shows only flow data compiled from existing sets of macroeconomic statistics—national accounts statistics, as well as balance of payments and monetary statistics (specifically, from the *DCS*). Monetary statistics are reported as stocks, whereas the other source data usually are flow data. Flows for the monetary statistics components are calculated as period-to-period changes (denoted by  $\Delta$  in the table) in the stock positions.

**8.105** Financing alternatives are shown in lines 2–4 of Table 8.12, as follows:

- Data for external financing (lines 2.1–2.4)—financing from the rest of the world—are available from the balance of payments statistics. External financing is divided into (1) foreign-direct-investment transactions between the rest of the world and the private sector (line 2.1); (2) net increases in liabilities of the central government and private sectors to the rest of the world (line 2.2); and (3) the increase in net foreign assets of the DC subsector with the rest of the world (line 2.3). Line 2.2 shows a net increase/decrease, meaning that the changes in financial assets held by the private and central government sectors are subtracted from the changes in liabilities incurred. Line 2.3 is also a net amount, meaning that foreign liabilities of DCs are subtracted from the foreign assets acquired by DCs. Line 2.4 shows that part of the change in net foreign assets arises from changes in the central bank’s holdings of net international reserves.
- Data for domestic financing (lines 3.1–3.3), which are mostly obtained from the *DCS*, consist of three major components. The change in domestic credit (line 3.1) consists of changes in loans and other types of credit that DCs provide to the central government and private sectors. The change in broad money (line 3.2) is composed of changes in funds supplied by the private sector (money holders) to the DCs. The change in other domestic financing (line 3.3) consists of changes in loans, equity shares, and other credit from OFCs and capital markets (mainly, capital-market transactions between the central government sector and the private sector).

### Compilation steps

**8.106** A description of the five steps for compiling a matrix for Level 1 financial statistics follows.

#### Step 1

**8.107** Step 1 involves the use of the above-the-line data from the national income and product accounts to obtain the net lending/borrowing in line 1. Net lending/borrowing is calculated as the difference between net saving and net capital formation, including net investment in inventories. For the rest of the world, net lending/borrowing corresponds to the current account balance *plus* capital transfers in the balance of payments statistics. Net lending/

borrowing is a control total; that is, the sum of external and internal financing must match the net lending/borrowing. Net lending/borrowing for the DCs sector is assumed to be zero.

#### Step 2

**8.108** Step 2 involves the insertion of the data for external financing, which are available from the balance of payments and monetary statistics. Foreign direct investment (line 2.1), both inward and outward, is assumed to arise exclusively from transactions between the rest of the world and the private sector (even though foreign direct investment by DCs may be significant in some countries).

**8.109** Estimation of the change in net external liabilities (line 2.2) is based on the balance of payments statistics for individual sectors.  $NFB_g$  and  $NFB_p$  denote the data for the central government and private sector, respectively. The sum,  $NFB (= NFB_g + NFB_p)$ , differs from the total change in external liabilities in the balance of payments, because of the exclusion of foreign liabilities of the DCs sector. Foreign liabilities of the DCs sector are included in line 2.3, using the data from the *DCS*.  $\Delta NFA$  is equal to the net change in foreign assets *less* the net change in foreign liabilities for the DCs sector. Line 2.4 shows the change in net international reserves of the central bank.

#### Step 3

**8.110** Step 3 uses *DCS* data to obtain the change in domestic credit (line 3.1) and the change in broad money (line 3.2).

**8.111** The  $\Delta DC$  in line 3.1 is the period-to-period change in domestic credit extended by the DCs, where  $\Delta DC_g$  refers to net domestic claims on the central government *less* central government deposit holdings. The illustration in Table 8.12 shows the central government sector as a recipient of funds (positive sign). Similarly, the table shows changes in domestic credit to the private sector ( $\Delta DC_p$ )—based on the period-to-period change in claims on the private sector—as a recipient of funds.

**8.112** The change in broad money ( $\Delta BM$ ) in line 3.2, also obtained from the *DCS* and shown with a positive sign, represents an increase in financial resources in the DCs sector and a reduction in resources in the counterpart sectors—that is, the private sectors that are money holders.

**Table 8.13. Examples of Sectors and Financial Instrument Categories in Level 2 Financial Statistics**

<b>Sectors</b>	
Financial corporations	Securities other than shares
Depository corporations	Treasury bills
Central bank	Treasury bonds
Other depository corporations	State and local government securities
Commercial banks	Financial corporations securities
Building societies	Public nonfinancial corporations securities
Trust companies	Other nonfinancial corporations securities
Other financial corporations	Securities issued by nonresidents
Finance companies	Shares and other equity
Life insurance corporations	Financial corporations shares
Non-life insurance corporations sector	Quoted
Pension funds	Unquoted
General government	Nonfinancial corporations shares
Central government	Quoted
State and local government	Unquoted
Social security funds	Foreign shares
Nonfinancial corporations sector	SDR allocation
Public nonfinancial corporations	Loans
Other nonfinancial corporations	Central bank loans
Other residents	Loans to banks other than central bank loans
Rest of the world	Loans to nonbank financial institutions
	Loans to central government
	Loans to state and local government
	Loans to public nonfinancial corporations
	Loans to other nonfinancial corporations
<b>Financial Instrument Categories</b>	Mortgage loans
Gold and SDR	Other loans
Gold (central bank only)	Loans to other residents
SDR holdings (central bank only)	Mortgage loans
Currency and deposits	Other loans
Currency notes and coins	Loans to/from nonresidents
Interbank deposits (central bank and ODCs)	Insurance technical reserves
Nonbank financial institutions' deposits	Insurance reserves for residents
Central government deposits	Insurance reserves for nonresidents
State and local government deposits	Pension reserves
Social security funds deposits	Financial derivatives
Public nonfinancial corporations deposits	Other accounts receivable/payable
Other nonfinancial corporations deposits	Other accounts with residents
Other resident deposits	Other accounts with nonresidents
Foreign notes and coins	
Deposits with/from nonresidents	

#### Step 4

**8.113** Step 4 involves the computations for the other domestic financing in line 3.3. For the central government sector, other domestic financing is given by the difference between the sector's net lending/borrowing position and the previously estimated financing components, that is,

$$ODF = (S - I)_g - NFB_g - \Delta DC_g,$$

where  $(S - I)_g$  denotes saving *minus* investment of the central government.

**8.114** The same absolute amount, but with the opposite sign ( $-ODF$ ), is the other domestic financing

for the private sector, implying that domestic financing from outside the DCs sector is in the form of an exchange of resources between the central government and the private sectors.

#### Step 5

**8.115** Step 5 involves the calculations for line 4, which contain the statistical discrepancy between net lending/borrowing and the sum of external and domestic financing. Conceptually, the results in Line 4 should be zero for each sector, but such results in general are not obtained in practice. For the central government sector, the discrepancy is zero, because the financing is forced to equal net lending/borrowing. However, a nonzero statistical

discrepancy can be expected for other sectors. The statistical discrepancy for the DCs sector is equal to *changes in other items (net)* in the DCS. The statistical discrepancy for the rest of the world is the same as “net errors and omissions” in the balance of payments statistics.

### Comments on Level 1

**8.116** Level 1 financial statistics have advantages and shortcomings. Among the advantages, a Level 1 table identifies the broad sectors of the economy that provide funds for investment. Despite its simplicity, the Level 1 framework also shows how those funds were transformed and used by other sectors. Over several periods, the table provides a glimpse of how the financing of the economy is evolving. It shows the growth of the use of financing by the private sector relative to use by the central government and the importance of financing supplied by the rest of the world relative to financing by DCs.

**8.117** Despite the relative ease of compilation, Level 1 financial statistics have significant shortcomings, including the limited information about the types of financing provided by FCs or capital markets.

**8.118** A further limitation is that the Level 1 framework is for flow data only, even though economy-wide data on stock positions have become increasingly important for financial analysis and policymaking. Moreover, the single-column presentation does not allow users to analyze the components of changes in sectoral balance sheets. The Level 1 statistics show only that the increase in a sector’s financial resources has arisen from a increase in liabilities or a decrease in financial assets, or that a reduction in a sector’s resources has been the result of a decrease in liabilities or an increase in financial assets.

**8.119** Shortcomings of the Level 1 statistics also include the lack of separate data for nonfinancial sectors—in particular, the other resident sectors (households and NPISH) and nonfinancial corporations—which masks the divergent behavior of financing by these sectors.

**8.120** Use of data for the central government would facilitate the calculation of the financial flows between the central government and the private sector, while improving the calculation of the residuals described earlier in Step 4.

**8.121** Finally, the Level 1 framework account does not facilitate an independent check that more detailed financial statistics could provide for the amount of net lending/borrowing. Financial accounts that embody more detailed data for FCs and capital markets more fully specify the amount of net financial investment, which can be used to evaluate the accuracy of the data for net lending/borrowing.

### The SNA-Integrated Financial Account and Financial Balance Sheet (Level 2 Financial Statistics)

The SNA **integrated financial account** (presented in Table 8.3 and in the financial part of Table 8.6) represents further development of flow of funds beyond the sectoral and financial asset detail provided in the basic accounts. The integrated financial account is a two-dimensional matrix that covers all institutional sectors and financial asset categories. (*MFSM*, ¶460)

**8.122** This section presents the five steps for compiling Level 2 financial statistics, which are designated as the 1993 SNA-*integrated financial account and financial balance sheet*. For illustrative purposes, it is assumed that the country has a statistical system that produces the DCS and FCS and that the country’s capital market is at a formative stage in which equity shares and debt securities are beginning to be traded.

#### Overview

**8.123** The Level 2 financial statistics contain FC balance-sheet data that increase the level of detail of the statistics, relative to those at Level 1. The accounts include both stock and flow data (transactions and other flows). For each sector, financial assets (or uses, in the case of flows) and liabilities (sources, in the case of flows) are shown. This *Guide* recommends that Level 2 financial statistics be compiled on a quarterly basis. The Level 2 statistics make use of below-the-line data only and therefore can be compiled in the absence of quarterly data for the nonfinancial components of the national accounts statistics.

**8.124** A major objective of Level 2 financial statistics is to incorporate data for sectors’ net financial investment, which is defined as the difference between net acquisition of financial assets and net

incurrence of liabilities. Conceptually, net financial investment is equal to net lending/borrowing, as derived from the above-the-line data. Therefore, Level 2 financial statistics facilitate the evaluation of the above-the-line data in the capital account in the nonfinancial section of the national accounts statistics. Quarterly data for the Level 2 statistics provide an estimate of the bottom line in the above-the-line data in the absence of a full set of quarterly national accounts statistics.

**8.125** The Level 2 financial statistics incorporate supplementary data from the capital markets—specifically, data for government securities and equity shares from the perspectives of both issuing and holding sectors. At Level 2, counterpart data in the FCs’ balance sheet are used to obtain the stock positions for domestic sectors and the rest of the world.

**8.126** A critical difference between the financial statistics and the *DCS* and *FCS* presentations is that, in the financial statistics, transactions and stock positions of nonfinancial and financial sectors are presented on a gross basis, whereas the *DCS* and *FCS* presentations focus to some extent on FCs’ net positions and net flows. Level 2 financial statistics present transactions and positions across the FC subsector on a gross basis.

**8.127** Many transaction flows in Level 2 financial statistics, like those in Level 1 statistics, are derived from changes in stock positions. Directly reported data for transactions among sectors, except those from balance of payments statistics, are likely to be sparse. The compilation of transactions data requires inputs from other data sources or estimation procedures to separate transactions from valuation changes and OCVA.

**8.128** Table 8.13 shows a representative list of sectors and financial instrument categories for the Level 2 financial statistics. More sectoral disaggregation is included than at Level 1. In the Level 2 statistics, the FC data are divided into separate sets for the DC and OFC subsectors, and DCs are further disaggregated to separate the central bank and ODC data. Subsectors are also specified for the nonfinancial corporations and general government sectors. Also incorporating the other resident sectors (households and NPISH) and the rest of the world, the Level 2 statistics contain all major sectors and subsectors, as described in Chapter 3 of this *Guide*.

**8.129** As shown in Table 8.13, the Level 2 statistics contain financial instrument categories that are consistent with the financial asset classifications in the *MFSM*, providing much more detail than the Level 1 statistics. It is recommended that the Level 2 framework be built around the major categories of financial instruments in the *MFSM*. Further disaggregation of these categories can be introduced in the national context. The Level 2 framework, as illustrated in Table 8.13, contains the full range of financial instruments—currency, deposits, loans, securities other than shares, shares and other equity, and other categories. As shown in Table 8.13, the framework can incorporate further disaggregation by type of financial asset/liability, if data for the more narrowly defined categories are available. For example, loans can be disaggregated into separate categories for mortgage loans and other loans, and other loans can be further disaggregated into commercial loans and consumer loans—subject to data availability, cost constraints on data compilation, and whether the data are sufficiently analytically useful to justify disaggregation.

### Compilation steps

**8.130** The five steps for the compilation of the Level 2 financial statistics are:

- *Step 1.* Balance-sheet data for FCs are used to construct FC-sector and FC-subsector totals.
- *Step 2.* Counterpart data from the FCs’ balance sheets are used to commence the compilation of the data for the nonfinancial sectors.
- *Step 3.* Data from the capital markets and other sources are used to enhance the data disaggregation by financial instrument for the nonfinancial sectors to complete the accounts for the nonfinancial sectors.
- *Step 4.* IIP data are used to construct the financial statistics for the rest of the world.
- *Step 5.* Flow data from the FCs, balance of payments statistics, and price indices for securities are used to construct separate data for transactions and other flows.

**8.131** At each step, compilers must exercise judgment about the source data to be used and the estimation procedures to be employed in the absence of source data. If more than one data source for a component is available, compilers must determine the most reliable source data to use as a control total.

**Table 8.14. Stock Positions of Financial Corporations**

Stock Positions End of March 2003	Financial Corporations		Depository Corporations		Central Bank		Other Depository Corporations		Other Financial Corporations	
	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Gold and SDRs	895	0	895	0	895		0	0	0	0
Currency and deposits	67,373	188,386	53,824	186,046	30,098	75,037	23,726	111,009	13,550	2,340
Securities other than shares	139,104	0	124,742	0	71,128		53,614	0	14,362	0
Shares and other equities	11,107	52,615	1,144	44,035		6,363	1,144	37,672	9,963	8,580
Loans	66,118	32,188	63,073	28,643	4,799	27,020	58,274	1,623	3,046	3,545
Insurance technical reserves	0	24,452	0	0			0	0	0	24,452
Financial derivatives	62	221	62	221		159	62	62	0	0
Other accounts receivable/ payable	8,257	9,816	5,366	6,833	3,215	1,010	2,150	5,822	2,891	2,983
Subtotal	292,916	307,678	249,105	265,779	110,135	109,590	138,970	156,188	43,812	41,900
Net financial position	0	-14,762	0	-16,674		545	0	-17,219	0	1,912

**8.132** Compilers need to compile the sector accounts on a gross basis, given that data netting could result in the loss of significant analytical content. Suppose a financial instrument is a financial asset of an FC and a liability of another FC. The compilers would record both the asset and liability positions in the FC accounts. Using these data for gross positions, the amount of FC lending to FCs and the amount of FC borrowing from FCs could be compared, which would not be the case if inter-FC positions were netted out.

#### Step 1

**8.133** Step 1 is based on the balance-sheet data for FCs, which are used in the *DCS* and *FCS*. The matrix in Table 8.14 illustrates the stocks of financial assets and liabilities in the FC sector and its subsectors for the central bank, ODCs, and OFCs. The table displays the row summations for financial assets and liabilities for each subsector, without netting of inter-sectoral positions.

**8.134** At Step 1, compilers need to ensure that important equalities hold. For example, the amount of ODC deposit liabilities in the central bank accounts must equal the amount of the corresponding deposit holdings in the aggregate ODC accounts. In some cases, the equality may not hold, because the central bank's time of recording of such deposits may differ from the time of recording at ODCs. In such cases, the central bank's data are used for both the central bank's liabilities and the ODCs' assets, overriding the data obtained from the sectoral balance sheet of

the ODCs. Central bank data usually are expected to be more accurate, given that these data come from a single source, rather than from aggregation of data from multiple sources (that is, data reported by individual ODCs), and central banks usually have reliable recording procedures. In addition, the central bank data usually include the deposit liabilities to banks in liquidation, which may be excluded from the set of individual banks that are data reporters.

**8.135** The upper row of Table 8.15 shows that, prior to data adjustment, the total ODC assets in the form of deposits at the central bank did not equal the central bank's deposit liabilities to ODCs. The lower row shows the data after an adjustment in which the ODC asset total was replaced by the central bank total, based on information that some deposits of banks in liquidation were not included in the asset data reported for ODCs and that this omission was the most likely source of the discrepancy. Depending on the type of discrepancy and the information available, alternative methods of data adjustment may be appropriate.<sup>4</sup>

**8.136** Compilers should ensure that OFCs' deposit holdings equal the liabilities for such deposits in the FC sector. If they are not equal, the data for DCs' deposit liabilities usually are used as the control total. Based on additional information, compilers may

<sup>4</sup>Compilers are likely to seek information from agencies that collect other types of statistics (for example, regulatory and supervisory agencies), as well as from industry sources.

**Table 8.15. Adjustment for Conflicting Data**

ODC deposits	Depository Corporations		Central Bank		Other Depository Corporations	
	Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Before adjustment	16,135	15,216		15,216	16,135	
After adjustment	15,216	15,216		15,216	15,216	

choose to distribute any discrepancy among the OFC subsectors, possibly in proportion to the reported deposit holdings of the various categories of OFCs.

### Step 2

**8.137** In Step 2, counterpart data in the balance sheet of the FCs are used to estimate the stocks of the financial assets and liabilities of the nonfinancial sectors. For each financial asset/liability category in the FC sector, the amount in the financial asset or liability category of the FCs is entered in the corresponding liability or asset category, respectively, of the nonfinancial sector counterpart.

**8.138** Initially, compilers may find it helpful to assume that units in the nonfinancial sectors transact only with FCs, which is clearly the case for deposits and insurance and pension reserves. The assumption is less likely to hold for other financial instrument categories, but is a useful approximation for developing countries in which the FC sector is the dominant counterpart for financial transactions of the nonfinancial sectors.

**8.139** Availability of counterpart data may depend on the type of financial instrument. Compilers should retain all such data from the collection process. If information on counterparties is not available, compilers may estimate totals or may construct sectoral allocations for some categories of financial asset holdings and liabilities, using information about the financial instruments in a category. Compilers might need to assume that most corporate securities were issued by other nonfinancial corporations, or that all subordinated debentures were issued by FCs.

**8.140** When the data are not sufficient to identify the securities holder or issuer, the compiler should attempt to obtain supplementary information directly from FCs. Without such direct information, the compiler would need to distribute securities holdings to

the most likely counterpart sector(s), documenting the distribution method for future evaluation.

**8.141** Numerous other issues are likely to arise, owing to insufficient counterpart data. Experience indicates that loan data obtained from OFCs are likely to be inadequately sectorized by counterpart (borrower). Supplementary information may be available for estimation of a reasonable allocation across counterpart sectors. If not, judgment methods must be used in making the sectoral allocations. In determining the financial instrument categories, for instance, compilers should consider differences in the availability of counterpart data.

**8.142** Even when available, counterpart data may not be in a form that can be readily inputted into the accounts. For example, FCs sometimes categorize loan data by industry rather than by economic sector. In such cases, a special survey may be needed to obtain information for allocating the business loan data, given that an industry category can apply to both public and other nonfinancial corporations and sole proprietorships. In the absence of a special survey, compilers may need to confer with lenders in allocating the data to the appropriate economic sectors.

**8.143** Alternatively, reported data for FC lending may be classified by purpose of borrowing, rather than by industry or sector. In such cases, the sector of the borrower is sometimes revealed by the type of loan. Most home mortgage loans are liabilities of the household sector, and most commercial mortgage loans are liabilities of other nonfinancial corporations. It may be appropriate to separate mortgage loans from other loans, as is shown in Table 8.13, because the allocations among counterparts are somewhat different.

**8.144** Counterpart data rarely exist for currency notes and coins issued by central banks (or, in some cases, central governments). Compilers need to dis-

tribute currency holdings across sectors, using rules of thumb (such as in proportion to sectors' deposit holdings). In most developing countries, other resident sectors (mainly households) hold a large share of the notes and coins in circulation.

### Step 3

**8.145** In Step 3 for the Level 2 financial statistics, data from the capital markets and other sources are used to provide greater detail and to improve the quality of the financial asset/liability data for nonfinancial sectors. Such data may be scarce in the early stages of a statistical program of a developing country, and cost constraints may impede the development of new source data. Nonetheless, additional data may become available from market sources, such as equity and bond market exchanges, trade associations, government regulatory bodies, or custodian and registration agents. Compilers of Level 2 financial statistics should search for such sources of data. An active program to develop the financial statistics may spur the supplying of such data, given that market participants and policymakers have incentives for obtaining financial statistics for their analytical purposes.

**8.146** Supplemental data for government securities and equity shares listed on exchanges often are available at a relatively early stage of financial statistics development. The government may provide data on the counterpart sectors (holders) for the securities that the government issues. However, the government data may not be identical to the balance-sheet data for FCs. Compilers must decide if data consistency can be enhanced by using only the FCs' balance-sheet data as the source for FCs' holdings of government securities. The government data could be used on a secondary basis to distribute government securities holdings by sectors other than the FC sector.

**8.147** Compilers are able to use stock exchange data to obtain an estimate of the total market value of outstanding corporate shares issued by financial and nonfinancial corporations. However, data on share holdings by sector may be available only for FCs' holdings of equity shares, as reported by the FCs. Compilers may assume that the remainder of the domestic holdings outside the FCs sector are held by other nonfinancial corporations.

### Step 4

**8.148** Step 4 involves insertion of IIP data—stock data for the rest of the world—into the Level 2

matrix. In countries where IIP data are available only on an annual basis, compilers must estimate the quarterly data, using quarterly flow data in the balance of payments statistics. Data on domestic counterparts to nonresidents' financial asset/liability positions (other than those with FCs) are likely to be limited. Compilers need to overcome the data deficiencies by using estimation methods that are based on the IIP data and any available supplementary data or qualitative information.

**8.149** Table 8.16 shows a mapping of IIP components into the corresponding stock positions in the financial statistics. IIP data for equity shares—direct investment in equity shares, including reinvested earnings, and portfolio investment in equity shares—are the inputs to the shares and other equity (foreign) component of the financial accounts (see Table 8.16, line 1 and line 3). Most equity shares issued by the rest of the world are financial asset holdings of other nonfinancial corporations, but FCs in some countries also hold some of these shares. Data for FCs' holdings are obtained from the balance-sheet data reported by FCs. The difference between FCs' holdings and the IIP total can be allocated to the other nonfinancial corporations, using the assumption that FCs and other nonfinancial corporations are the only domestic holders of foreign equity shares. The same assumption is applied to sectorization of foreign debt securities in portfolio investment (see Table 8.16, line 4).

**8.150** Table 8.16 (line 2) also shows the mapping of other capital assets in direct investment into the stock position in loans in the financial statistics. These loans are assets of the other nonfinancial corporations sector and liabilities of the rest of the world—in addition to the liabilities for loans extended by the FC sector. Other capital liabilities in the IIP (see Table 8.16, line 8), which are liabilities of nonfinancial corporations and asset holdings of the rest of the world, are also classified as loans in the financial statistics, and are in addition to the loan liabilities of FCs and the government sector.

**8.151** The mapping of other investment assets from the IIP (Table 8.16, line 5) requires care to avoid double counting of balance-sheet data for FCs. The IIP data are the amounts of deposits, loans, and other foreign liabilities of the rest of the world. In the absence of sectoral disaggregation in the IIP, the positions are assumed to be foreign assets of ODCs



Table 8.16. IIP Mapping into Level 2 Financial Statistics

IIP Component	Financial Instrument Classification in the Financial Statistics
<b>Assets</b>	
Direct investment abroad	
1. Equity capital and reinvested earnings	Shares and other equity (foreign shares): liabilities of the rest of the world and assets of other nonfinancial corporations (input the amount that exceeds FCs' balance-sheet data).
2. Other capital	Loans: liabilities of the rest of the world and assets of other nonfinancial corporations.
Portfolio investment abroad	
3. Equity securities	Shares and other equity (foreign shares): liabilities of the rest of the world and assets of other nonfinancial corporations (input the amount that exceeds FCs' balance-sheet data).
4. Debt securities	Securities other than shares (securities issued by nonresidents): liabilities of the rest of the world and assets of other nonfinancial corporations (input the amount that exceeds FCs' balance-sheet data).
5. Other investment	Other foreign assets: liabilities of the rest of the world and assets of other nonfinancial corporations (input the amount that exceeds FCs' balance-sheet data).
6. Reserve assets	Data from the central bank's balance sheet.
<b>Liabilities</b>	
Direct investment in reporting economy	
7. Equity capital and reinvested earnings	Shares and other equity (domestic shares of nonfinancial corporations): assets of the rest of the world and liabilities of other nonfinancial corporations.
8. Other capital	Loans: assets of the rest of the world and liabilities of other nonfinancial corporations.
Portfolio investment in reporting economy	
9. Equity securities	Shares and other equity (domestic shares of nonfinancial corporations): assets of the rest of the world and liabilities of other nonfinancial corporations.
10. Debt securities	Securities other than shares (government bonds or securities issued by other nonfinancial corporations): assets of the rest of the world and liabilities of the central government or other nonfinancial corporations.
11. Other investment	Other foreign liabilities: assets of the rest of the world and liabilities of other nonfinancial corporations (input the amount that exceeds FCs' balance-sheet data).

and OFCs. Differences between these other investment assets in the IIP and the balance-sheet data for ODCs and OFCs are recorded as other foreign assets of the other nonfinancial corporations. The same treatment is applied to other investment liabilities in the IIP (Table 8.16, line 11).

**8.152** Reserve assets in the IIP (Table 8.16, line 6) are not used in the financial statistics matrix, because these data are obtained from the central bank's balance sheet. The central bank data and the IIP data for reserve assets should agree unless the central government holds some of the reserve assets (which are entered in the financial statistics, classified by type

of financial instrument, in the asset section for the central government).

**8.153** The IIP data for direct investment in equity capital and reinvested earnings (Table 8.16, line 7) are used to estimate the shares and other equity holdings of the rest of the world. However, it is unlikely that the IIP data are included in the total market capitalization of the shares on the exchange, which the compiler uses as control data for total domestic shares. Compilers incorporate the direct investment component of the IIP data in the total value of domestic shares. In the absence of other information, the compiler may assume that, on the liability side,

the shares have been issued by other nonfinancial corporations.

**8.154** The market capitalization of exchange-traded shares is likely to include portfolio investment in equity, which is included in the IIP data (Table 8.16, line 9). Therefore, the value of foreign holdings of shares does not need to be added in calculating the total market capitalization. These asset holdings of the rest of the world are deducted from the total issuance to obtain the holdings of other nonfinancial corporations. In the absence of other information, compilers may assume that all of the liabilities are claims on other nonfinancial corporations.

**8.155** For debt securities (Table 8.16, line 10), the IIP shows asset holdings of the rest of the world, but compilers need to make assumptions about the most plausible asset distribution by type of financial instrument. Particular attention should be given to reconciling the government bond data, as reported by the government and as contained in the IIP.

**8.156** A country that does not have IIP data is likely to estimate foreign direct investment by accumulating flow data from the balance of payments statistics. For a country that compiles Level 2 statistics, compilers may find that positions between nonfinancial sectors (typically, the other nonfinancial corporations sector) and the rest of the world are less significant than positions between the FCs and the rest of the world. Nevertheless, the amount of foreign direct investment by other nonfinancial corporations could be significant. Compilers need to explore the availability of stock data for foreign direct investment.

#### Step 5

**8.157** Step 5 is used to distinguish between transactions and other flows. A compiler can request that data be provided directly by FCs—for example, with reference to (1) the profit-or-loss accounts as source data for holding gains and losses arising from financial asset/liability revaluations, for extraordinary items to be classified as OCVA, etc.; and (2) information about reclassification of assets/liabilities and other events affecting the financial statements of FCs. Similar information can be requested from nonfinancial corporations.

**8.158** The compiler should obtain *transactions data* for the rest of the world and its counterpart sectors from the balance of payments statistics, while being mindful

that differences between the balance of payments data and period-to-period changes in IIP data may arise from differences in the estimation of financial asset/liability valuations and the treatment of OCVA.

**8.159** Compilers will find that balance of payments statistics generally contain more disaggregation than the IIP data—by type of financial instrument (for example, for the category of other investment) and by economic sector. As a result, the mapping of the balance of payments data into the financial statistics is more straightforward than the mapping of IIP data.

**8.160** Compilers can obtain transactions data for the general government from government finance statistics, while being aware that the government finance statistics often have shortcomings in terms of the coverage (for example, the exclusion of nonbudgetary central government activities, state and local government, and social security funds), disaggregation by financial instrument category, and availability of counterpart data.

**8.161** For shares and other equity, compilers in countries with organized stock exchanges should have access to share price indices (SPIs), which can be used in the estimation of equity revaluations. The transactions data are derived as the period-to-period changes in the stock positions *less* the revaluations.<sup>5</sup>

**8.162** Compilers for countries that do not have active secondary markets for debt securities will find it difficult to obtain price indices for securities other than shares. If share price indices are unavailable, period-to-period changes reported by FCs and other sectors may need to be used to estimate the transactions in securities other than shares. A security-by-security database provides the most relevant data, but such databases are unavailable for many countries.

#### Comments on Level 2

**8.163** Level 2 financial statistics provide many advantages over Level 1 statistics. In particular, the Level 2 framework facilitates more thorough analysis of financing in the economy, given that Level 2 includes data for individual economic sectors and specifies the linkages between financial flows and stocks. The data for various categories of financial

<sup>5</sup>Enhanced procedures for Level 3 financial statistics are shown in Table 8.18.

assets/liabilities allow users to monitor growth and developments in specific financial markets. The Level 2 data are also more useful for making international comparisons.

**8.164** More generally, the expansion to two columns for each sector, showing both assets and liabilities, offers a clearer picture of the financial activities of the sectors. Level 1 data do not show the types of transactions that led to changes in *net financial investment*, whereas the Level 2 data show the extent to which the changes in such investment resulted from changes in liabilities and changes in assets, respectively. For example, the data might show an improvement in the financial position of the nonfinancial corporations sector, resulting from both an increase in financial assets and a reduction in liabilities.

**8.165** Level 2 financial statistics have significant shortcomings, given that a major subset of the Level 2 data is based on counterpart data from the FCs' balance sheets and given that the flow data may be estimated primarily from the stock data. Economies can be expected to experience financial-market development and financial innovations that result in the introduction of additional types of financial instruments and new channels for financial intermediation.

**8.166** Countries may consider an expansion of the financial statistics by migrating to the Level 3 framework, which shows the positions and transactions between domestic nonfinancial sectors. Given that the Level 2 framework focuses on the calculation of transactions from period-to-period changes in stocks, revaluation of securities and write-offs of loans are sometimes ignored or are not fully represented, thereby distorting the data for financial flows. Such distortions become increasingly significant as a country's financial system is liberalized and its capital markets develop.

### Detailed Financial Statistics Matrices (Level 3 Financial Statistics)

While a financial account flow of funds provides a great deal of sectoral detail, it is only at the two-dimensional level, that is, it shows net incurrence of liabilities by sector and net acquisitions of assets by sector. To address the three-dimensional issue of which sectors finance other specific sectors through the use of specific financial assets, it is necessary to develop **more elaborate flow of funds matrices.** (*MFSM*, ¶462)

**8.167** This section discusses issues that are encountered in upgrading from Level 2 financial statistics to the detailed financial statistics matrices at Level 3.<sup>6</sup> The Level 3 statistics usually are applicable to countries that have money and capital markets that are highly developed. In these countries, corporations and households have wide choices of financial instruments, including financial derivatives and structured-finance products. A prerequisite to the development of the Level 3 statistics is that a country have a formal statistical system that yields high-quality data from a wide variety of sources. Even if the country's formal statistical system is well developed, additional data or supplementary information for refining the Level 3 statistics may emerge from private-sector sources such as trade associations, exchanges and financial markets, and privately sponsored surveys of particular types of financial activity.

**8.168** The channels and methods for collecting the data for the Level 3 statistics can be expected to vary across countries, reflecting the unique elements of each country's statistical and financial systems. However, the countries' Level 3 statistics are similar to the extent that, in each country, the statistics facilitate the tracing of financial intermediation through various channels in the economy.

**8.169** A fundamental objective of Level 3 financial statistics is the integration of financial statistics and the nonfinancial components of the national accounts statistics. The financial statistics include the accumulation accounts—the capital account, financial account, revaluation account, and OCVA account—and the balance sheets of the sectors specified in the *1993 SNA*. The Level 3 framework can be viewed as a refinement of Level 2 statistics with respect to collection/estimation of flow data—the separate categories of transactions, revaluations, and OCVA—and the reconciliation of the flow and stock data.

**8.170** The Level 3 framework contains more detailed derivation of sectors' net financial investment, which must be reconciled with net lending/borrowing in the capital account, as derived from the nonfinancial components of the national accounts statistics.

<sup>6</sup>Chapter VIII of the *MFSM* focuses on the flow of funds matrices, whereas this section covers both flow of funds and balance-sheet matrices.

**8.171** The structure of Level 3 financial statistics contains detailed sector and subsector accounts for net purchases of financial assets and net incurrence of liabilities, as well as accounts for sector and subsector holdings of financial assets and liabilities. Accompanying the accounts for transactions and balance-sheet positions are sector and subsector accounts for revaluations and OCVA.

**8.172** A separate set of steps for compilation of Level 3 financial statistics is not presented. In fact, the five-step procedure described for the Level 2 statistics also applies at Level 3. The Level 3 framework can be viewed as an extension of the Level 2 statistics, resulting from refinements in the data collection and estimation techniques and inclusion of additional accounts for a larger set of financial subsectors and a more disaggregated set of financial assets/liabilities. In addition, Level 3 contains more financial information about the subsectors of the nonfinancial sectors and their transactions.

**8.173** For subsectors in the FCs sector, Level 3 includes money market mutual funds (MMMFs)—a subsector of the DCs sector—and mutual funds other than MMMFs, which are a subsector of the OFC sector. The insurance corporations and pension funds subsectors also have more detail than in Level 2. Other subsectors are possible, depending on the structure of the financial markets and institutional units in the country. Table 8.17 also includes NPISH, as an additional nonfinancial subsector.

**8.174** Compilers typically are able to classify instruments under the broad categories in Table 8.17, which follow the recommendations in the *MFSM* and this *Guide*. For example, among financial instruments, securities other than shares include commercial paper—issued by the largest and most creditworthy corporations, as a substitute for bank financing. Another subcategory is structured-finance products such as asset-backed securities. The list of financial instruments in Table 8.17 includes mutual fund shares, consumer credit, financial leases, government loans, nonfinancial corporation loans, and financial derivatives disaggregated by type of contract. Compilers need to be prepared to introduce new classifications, arising from continuing development and innovation in financial markets that expand the list of financial instruments. Given that some financial instruments may be unique to a particular country,

this *Guide* is not prescriptive with respect to the classification of financial instruments within the broad categories of financial assets/liabilities; Table 8.17 is only illustrative.

#### **Enhancing detail for nonfinancial sectors**

**8.175** Level 3 financial statistics are distinguished from those at Level 2 by the extent of the detail shown for nonfinancial sectors. Whereas Level 2 statistics acquire value by exploiting the balance-sheet data for FCs, Level 3 enhances the information for the general government sector, nonfinancial corporations sector, and NPISH.

**8.176** A specific area for improvement relative to Level 2 financial statistics is the incorporation of financial positions between the government sector and nonfinancial sectors. These positions include government loans to corporations, households, and NPISH. The *Government Finance Statistics Manual 2001 (GFSM 2001)* offers examples from balance sheets of the government sector.

**8.177** Data for nonfinancial corporations may allow identification of financial positions with other domestic sectors. Nonfinancial corporations' loans and trade credits are examples of the types of data that can be introduced into the Level 3 statistics.

**8.178** An objective of the Level 3 financial statistics is to develop separate data for the NPISH sector. Few countries have such data, though several countries continue to work toward that end. A benefit from separate treatment of the NPISH sector is more accurate data for households; otherwise, NPISH are combined with households in the other resident sector, which is treated as the residual sector. Countries that are progressing toward distinguishing the NPISH data from the household data use special surveys, tax and registration records, and counterpart data.

**8.179** Finally, compilers should work toward the development of surveys for balance-sheet data that contain enough detail to show the full range of financial assets and liabilities of nonfinancial corporations. Unlike countries for which Level 2 statistics are broadly adequate, more-developed economies have sizable financial positions that are not covered by counterpart data in the FCs' balance sheets.

Table 8.17. Examples of Disaggregated Data Categories at Level 3

<b>Sectors</b>	
FCs	Public nonfinancial corporations deposits
Of which: Public FCs	Other nonfinancial corporations deposits
Depository corporations	Other resident deposits
Central bank	Foreign notes and coins
Other depository corporations	Deposits with/from nonresidents
Commercial banks	Securities other than shares
Building societies	Treasury bills
Trust companies	Treasury bonds
<i>Money Market Mutual Funds (MMMF)</i>	Local government securities
Other FCs	FCs securities
Other financial intermediaries	Public nonfinancial corporations securities
Finance companies	Other nonfinancial corporations securities
<i>Mutual funds other than MMMF</i>	<i>Structured financing products</i>
<i>Specialized financial institutions</i>	<i>Commercial paper</i>
<i>Special purpose companies</i>	Securities issued by nonresidents
<i>Funding corporations</i>	Shares and other equity
Insurance corporations and pension funds	Financial corporations shares
Life insurance corporations	Nonfinancial corporations shares
Non-life insurance corporations	Foreign shares
<i>Reinsurance corporations</i>	<i>Mutual fund shares</i>
<i>Corporate pension funds</i>	SDR allocation
<i>Other private pension funds</i>	Loans
Financial auxiliaries	Central bank loans
General government	FC loans to banks other than central bank loans
Central government	FC loans to nonbank financial institutions
State and local government	FC loans to central government
Social security funds	FC loans to state and local government
Nonfinancial corporations	FC loans to public nonfinancial corporations
Public nonfinancial corporations	FC loans to other nonfinancial corporations
Other nonfinancial corporations	Mortgage loans
Households	Other loans
<i>Nonprofit institutions serving households (NPISH)</i>	FC loans to other residents
Rest of the world	Mortgage loans
<b>Asset/liability categories</b>	<i>Consumer credit</i>
Nonfinancial assets	Other loans
Reproduced assets	<i>Financial leases</i>
Non-reproduced assets	<i>Government loans</i>
Of which: Land	<i>Nonfinancial corporations loans</i>
Gold and SDR	Loans to/from nonresidents
Gold	Insurance technical reserves
SDR holdings	Insurance reserves for residents
Currency and deposits	Insurance reserves for nonresidents
Bank notes and coins	Pension reserves
Bank deposits	Financial derivatives
Nonbank financial institutions deposits	<i>Forward-type</i>
Central government deposits	<i>Option-type</i>
Local government deposits	Other accounts receivable/payable
Social security funds deposits	<i>Trade credits</i>
	Other

### Special purpose entities

**8.180** Data collection for special purpose entities (SPEs) can be challenging. Level 3 financial statistics need to include the data for these entities, which are created for issuance of securities backed by financial assets or for other purposes. Such data are also needed for Level 2 financial statistics in which net financial investment is compiled for all sectors.

**8.181** The SPEs' balance sheets usually have few accounts. An SPE's assets may be limited to an asset portfolio acquired for securitization, and most or all of an SPE's liabilities may be in the form of the securities issued with the backing of the asset portfolio. However, SPEs often are unregulated, and formal means for collecting data on their assets and liabilities may be unavailable. The securities issued

by SPEs sometimes are asset holdings within sectors that have very limited data reporting, or are totally outside the data collection of the statistical system.

**8.182** SPE data sometimes are available through the agencies where the securities are registered. However, the data may be limited to total amounts of SPE securities issuance. Industry sources such as brokers and dealers who specialize in securitization may also be able to provide data on new issuances, repayments, and outstanding amounts of the securities. Market prices for asset-backed securities often are quoted in the capital markets. The period-to-period changes in market value are components of the revaluation accounts of the SPEs and the sectors that hold the securities.

#### ***Effect of secondary market transactions***

**8.183** Institutional units may trade outstanding securities several times in secondary markets, frequently leading to the transfer of the securities from the balance sheet of the original-purchaser sector to the balance sheet of another sector. Intrasectoral transactions are less problematic, given that the transactions do not affect the aggregated balance sheet of the particular sector. For economies with well-developed secondary markets and substantial intersectoral securities trading, data on securities holdings by sector of original purchaser can quickly become outdated for the purpose of estimating current securities holdings by sector and subsector. For example, central governments often provide data on purchases of new issues of government securities—that is, primary-market purchase data. However, through an active secondary market, the ownership of a single set of government securities may be transferred several times across sectors and subsectors prior to the maturity of the securities—for example, through the secondary market, from a securities dealer (OFC) to a commercial bank (ODC), from the commercial bank to an insurance corporation (OFC), and from the insurance corporation to an individual (other resident sectors).

**8.184** The existence of well-developed secondary markets necessitates the development of source data beyond those provided for the primary markets. In some cases, the data are directly reported by investors such as depository corporations, insurance corporations, pension funds, and securities dealers. Typically, other resident sectors is treated as the residual category of securities holders, if the total amount of

outstanding securities and the individual holdings of all other sectors and subsectors are known.

**8.185** If data are missing for more than just the other resident sectors, the holdings of some sectors/subsectors must be estimated with the use of data sources such as securities registration offices or trusts or other custodians of their clients' securities. However, difficulties may be encountered in disaggregating the securities by sector of holder, using the data as reported by registration offices and custodians.

#### ***Compiling OCVA and revaluation accounts***

**8.186** At Level 3, the flow data for financial statistics are disaggregated into transactions, revaluations, and OCVA. Table 8.18 summarizes the steps for estimating the stock and flow components for shares and other equity. The method is practical, but deficient in some respects. The market value for unquoted shares and other equity must be estimated in Step 2. International agreement on the estimation method does not exist. The method described in Table 8.18 also assumes that each sector holds a representative portfolio of equity shares that is roughly proportional to the weights in the market price index and that each sector has holding gains/losses that are proportional to their share holdings. However, the timing of transactions is throughout the holding period, resulting in differences between the estimated and actual holding gains/losses of the sectors. Refinements in the method could be built around the use of additional data that are sector specific—for example, data on holding gains/losses in income statements of insurance corporations and pension funds.

**8.187** For securities other than shares, estimates of holding gains/losses may be less reliable than the estimates for holding gains/losses for equity. The data sources for the estimation of transactions in bonds and similar financial assets may be less developed, and corporations may report the holdings at original purchase prices rather than at subsequent market values. Nonetheless, data on outstanding amounts are likely to be available, and securities price indices may be used for estimation of holding gains and losses on an aggregated basis.

**8.188** For loans, period-to-period changes in stock positions consist of transactions (net lending less repayment) and OCVA that are primarily in the form of loan write-offs and write-downs. Data for OCVA

**Table 8.18. Estimating Transactions, Revaluations, and OCVA for Shares and Other Equity**

Steps	Possible Data Sources	Comments
1. <i>Transactions</i> : Estimate net issuance of shares and secondary market transactions by each sector, at transaction prices.	Government registrations, market exchanges, and private industry sources.	Data are required for both gross issuance and retirement of shares. Information on the industry and/or type of corporation facilitates estimation by sector.
2. <i>Stocks</i> : Estimate the market value of total shares outstanding and the amount held by each sector.	Sectoral balance-sheet data and stock exchange sources.	Other resident sectors (primarily households) typically is designated as the residual holder. Data from household surveys, if available, may be directly used or may provide a check on the plausibility of the data obtained residually.
3. <i>Other flows</i> : Calculate the period-to-period change in the market value of shares held by each sector. The difference between the total change in value of shares held and net issuance (from Step 1) is the sum of holding gains/losses and OCVA.	Calculated from the flow and stock data in Steps 1 and 2.	Refinements include use of sector data, where available—for example, profit-or-loss data for holding gains/losses.
4. <i>Separation of revaluations and OCVA</i> : The amount calculated in Step 3 is disaggregated into holding gains and losses, using price indices, and OCVA.	The price indices should be as broad as possible. In some cases, specialized indices can be used for some sector holdings.	

arising from loan write-offs and write-downs can be obtained from the expense records of FCs and nonfinancial corporations.

**8.189** All foreign-currency-denominated assets and liabilities need to be translated into national currency units, using market exchange rates. The total holding gain/loss for each category of financial assets and liabilities is the sum of the holding gains/losses arising from the change in the market price or fair value (denominated in the foreign currency) and the holding gain/loss from translation into national currency units.

### Comments on Level 3

**8.190** Compilation of Level 3 financial statistics requires considerable judgment and often provides substantial leeway in choosing the best data from alternative sources that each have data deficiencies. Estimation techniques for missing data must be devised, and residual calculations may be numerous. Nonetheless, Level 3 financial statistics provide a substantial set of data for policy analysis and research. The main reasons for development of Level 3 financial statistics are to obtain a better understanding of the financial interactions among all sectors of the economy and with nonresidents and to

be able to relate these interactions to current performance, development, and growth of the economy.

### Estimation Techniques for Missing Data

**8.191** Compilers of financial statistics rely on various techniques to estimate incomplete data. To maintain a timely release calendar for financial statistics, compilers need to estimate missing data that will become available later, sometimes after protracted data reporting lags. In addition, techniques are available using annual data to estimate quarterly data.

**8.192** Two broad categories of estimation techniques are described in this section. The first category is techniques for obtaining quarterly estimates that are based on annual data. The second category is techniques for obtaining estimates of quarterly data that, though not yet available, will be provided in the future.

### Estimation of Quarterly Figures from Annual Sources

#### Sliding level method

**8.193** The simplest and most common method for estimating missing values of quarterly stock data is

based on the annual data for the immediately preceding year. The amount at the end for each of the first three quarters of year  $t$  is specified as the amount at the end of the year  $t-1$ , denoted by  $Y_{t-1}$ . The amount for the fourth quarter of year  $t$  is specified as the amount for the end of year  $t$  (premised on the availability of data for  $Y_t$ ). That is,

$$y_{1q} = Y_{t-1}$$

$$y_{2q} = Y_{t-1}$$

$$y_{3q} = Y_{t-1}$$

$$y_{4q} = Y_t.$$

For the fourth quarter data, the estimation “slides into” the current-year data. The sliding level is particularly useful for data series that are irregular, showing neither trend nor seasonality.

#### Complementation method

**8.194** If the changes in the annual data appear to be spread fairly evenly over the quarters of each year, the quarterly data can be estimated as follows:

$$y_{1q} = Y_{t-1} + [(Y_t - Y_{t-1})/4]$$

$$y_{2q} = y_{1q} + [(Y_t - Y_{t-1})/4]$$

$$y_{3q} = y_{2q} + [(Y_t - Y_{t-1})/4]$$

$$y_{4q} = Y_t,$$

where  $[(Y_t - Y_{t-1}) / 4]$  represents the “complementation” in the estimates for the first three quarters of year  $t$ .

#### Constant ratio method

**8.195** Annual data sometimes indicate that a quarterly time series can be approximated as a stable proportion of an annual time series. For example, annual data may indicate that bond holdings of pension funds can be treated as a constant proportion of total bond holdings. In that case, total bond holdings in year  $t$  is given by  $X_t = Y_{1,t} + Y_{2,t} \dots + Y_{N,t}$ , where  $Y_{j,t}$  ( $j = 1, \dots, N$ ) are the bond holdings of the  $N$  subsectors. The pension funds are denoted as subsector  $i$ . The pension-fund proportion of total bond holdings is  $p_i = (Y_{i,t-1}/X_{t-1})$ , and the quarterly estimates for the bond holdings of the pension funds are:

$$y_{i,1q} = p_i X_t$$

$$y_{i,2q} = p_i X_t$$

$$y_{i,3q} = p_i X_t$$

$$y_{i,4q} = Y_t.$$

If quarterly data are available for total bond holdings, these data can be used in estimating the quarterly data for the bond holdings of the pension funds:

$$y_{i,1q} = p_i X_{1q}$$

$$y_{i,2q} = p_i X_{2q}$$

$$y_{i,3q} = p_i X_{3q}$$

$$y_{i,4q} = Y_t.$$

#### Flow increment method

**8.196** It may be necessary to estimate quarterly stock data when only annual stocks and quarterly flows are available. Using the flow increment method, the accumulation of quarterly flows,  $f_{jq}$  ( $j = 1, 2, 3$ ), is added to the previous annual amount to obtain the estimates for the first three quarters:

$$y_{1q} = Y_{t-1} + f_{1q}$$

$$y_{2q} = Y_{t-1} + f_{1q} + f_{2q}$$

$$y_{3q} = Y_{t-1} + f_{1q} + f_{2q} + f_{3q}$$

$$y_{4q} = Y_t.$$

#### Proportional method

**8.197** A data series sometimes can be estimated by relating the time series to the quarterly growth of another time series. For example, quarterly amounts for a particular category of OFCs’ financial assets (for which only annual data are available) may be related to changes in the same category of ODC assets (for which quarterly data are available). Denoting the quarterly changes in the ODC series by  $x_{jq}$  ( $j = 1, 2, 3$ ), the quarterly estimates for the OFC data are:

$$y_{1q} = Y_{t-1}(x_{1q} / X_{t-1})$$

$$y_{2q} = Y_{t-1}(x_{2q} / X_{t-1})$$

$$y_{3q} = Y_{t-1}(x_{3q} / X_{t-1})$$

$$y_{4q} = Y_t.$$

#### Smoothing method

**8.198** Several methods can be applied to annual data for the estimation of a quarterly series that is relatively smooth. These estimation methods attempt to retain the cyclical and trend patterns implied in the annual data. One such method is shown below.



$$y_{1q} = Y_{t-1} + F_t \times Y_{t-2} / (Y_{t-2} + Y_{t-1} + Y_t + Y_{t+1}),$$

where  $F_t = Y_t - Y_{t-1}$

$$y_{2q} = y_{1q} + F_t \times Y_{t-1} / (Y_{t-2} + Y_{t-1} + Y_t + Y_{t+1})$$

$$y_{3q} = y_{2q} + F_t \times Y_t / (Y_{t-2} + Y_{t-1} + Y_t + Y_{t+1})$$

$$y_{4q} = Y_t.$$

### Estimation of Quarterly Figures When Data are Missing or Incomplete

#### Sliding level method

**8.199** The sliding level method can be applied to the estimation of recent observations for a quarterly data series for which the quarterly data are available, but only with a lag. The basic form of the sliding level method is applied when the data do not exhibit seasonality; it is assumed that the amount for the current quarter is the same as that for the immediately preceding quarter:

$$y_t = y_{t-1}.$$

If the data exhibit a seasonal pattern, the sliding level method is modified by relating the amount for the current quarter to that in the same quarter of the previous year:

$$y_t = y_{t-4}.$$

#### Substitution method

**8.200** The substitution method has both additive and multiplicative forms. In the additive form, the period-to-period changes in another series,  $x_t$ , are used in the estimation of the missing quarterly data:

$$y_t = y_{t-1} + (x_t - x_{t-1}).$$

In the multiplicative form, the formula for estimation of the missing quarterly data is:

$$y_t = y_{t-1}(x_t/x_{t-1}).$$

#### Trend method

**8.201** Using the trend method, it is assumed that changes in the unobserved time series are additively or multiplicatively related to past changes in the time series. The formulas for a data series that does not exhibit seasonal behavior are:

Additive:  $y_t = y_{t-1} + (y_{t-1} - y_{t-2}).$

Multiplicative:  $y_t = y_{t-1}(y_{t-1}/y_{t-2}).$

The formulas for a data series that has seasonal patterns are:

Additive:  $y_t = y_{t-4} + (y_{t-4} - y_{t-8}).$

Multiplicative:  $y_t = y_{t-4}(y_{t-4}/y_{t-8}).$

#### Extrapolation methods

**8.202** Extrapolation methods can be used for missing data series that are trended. The extrapolation formulas for the missing data are based on the latest available data and a weighted average of data for earlier periods. A formula that places the greatest weight on the most recent observations is:

$$y_t = y_{t-1}([ (3/6)(y_{t-1}/y_{t-2}) ] + [ (2/6)(y_{t-2}/y_{t-3}) ] + [ (1/6)(y_{t-3}/y_{t-4}) ]).$$

A similar formula for data that have a seasonal pattern is:

$$y_t = y_{t-1}([ (3/6)(y_{t-1}/y_{t-5}) ] + [ (2/6)(y_{t-2}/y_{t-6}) ] + [ (1/6)(y_{t-3}/y_{t-7}) ]).$$

#### Regression method

**8.203** Regression models can be used to incorporate the influence of various economic variables on the estimate of the missing data. Suppose the missing data are the amount of securities other than shares issued by nonfinancial corporations. Estimation of the missing data could be formulated so as to take account of the effects that interest rates and nonfinancial variables (for example, nonfinancial corporations' expenditures on capital goods) have on their issuances of securities. Though analytically appealing, the regression method has drawbacks, including the relatively large amount of effort that must be devoted to specification and estimation of the regression models. Having estimated the regression model, the results must be monitored to ensure that the relationship continues to hold over time or that the regression model needs to be reformulated and re-estimated.

### Editing, Data Checking, and Statistical Discrepancies

**8.204** Table 8.19 describes the relative reliability that is typical for various data collected or estimated for a financial statistics matrix. The data shown as highly reliable are those that usually can be directly obtained from FCs' reported data and the IIP and balance of payments statistics.

Table 8.19. Reliability of Data Estimates

	<div style="display: flex; justify-content: space-around; align-items: center;"> <span style="display: inline-block; width: 15px; height: 15px; background-color: black; margin-right: 5px;"></span> High           <span style="display: inline-block; width: 15px; height: 15px; background-color: gray; margin-right: 5px; margin-left: 20px;"></span> Middle           <span style="display: inline-block; width: 15px; height: 15px; background-color: lightgray; margin-left: 20px;"></span> Low         </div>													
	Financial Corporations				General Government		Nonfinancial Corporations				Other Resident Sectors		Rest of the World	
	Depository corporations		Other FCs				Public nonfinancial corporations		Other nonfinancial corporations		Asset	Liability	Asset	Liability
	Asset	Liability	Asset	Liability	Asset	Liability	Asset	Liability						
Currency and deposits														
Currency														
Deposits														
Loans														
Securities other than shares														
Central government securities														
Other securities														
Structured-financing instruments														
Shares and other equities														
Financial derivatives														
Insurance technical reserves														
Other accounts receivable/payable														

**8.205** The data shown as moderately reliable are those that involve estimation, but for which some source data are available on an annual or less frequent basis, or are contained in surveys. Estimates for trade credit and some types of financial asset holdings of government may be in this category.

**8.206** The data shown as having low reliability are those for which few, if any, source data exist. Many estimates of data in this category are based on residual calculations. These include data for the financial assets of other resident sectors (households and NPISH), as well as data for miscellaneous categories of financial assets and liabilities of nonfinancial sectors.

**8.207** The unshaded cells in Table 8.19 are those for which liabilities do not exist. For example, house-

holds and NPISH do not issue currency, and only the government issues government securities.

### Editing and Checking Data

**8.208** Careful examination of the data in each row and column of the financial statistics matrix is the simplest and most direct approach to identifying data problems. This examination can be followed by the construction of charts and tables of the time-series data that may reveal data outliers that may need to be verified or corrected.

**8.209** For plausibility testing of the aggregate data, compilers should have some expectation as to the reasonableness of data for each cell in the financial statistics matrix. Unexpected movements in the data should be explainable in terms of economic behavior, if not

attributable to data collection, estimation, or compilation errors. For this purpose, basic underlying relationships among macroeconomic data need to be understood. Compilers' knowledge may need to be complemented by consultation with experts outside the unit that compiles the financial statistics.

**8.210** Data problems are often more apparent in a time-series context than through examination of a financial statistics matrix for a single period. The matrix format provides a framework for checking that the data meet adding-up requirements and broad plausibility tests, but time series presented in tables or charts—possibly in differenced or percentage-change form, or as ratios of two time series—are highly useful for identification of outliers that need to be investigated.

### Statistical Discrepancies

**8.211** Statistical discrepancies arise when two data sets provide different results for a particular data category. A problem that often appears in financial statistics is the statistical discrepancy between net lending/borrowing (*NLNB*) derived from the capital account and net financial investment (*NFI*) in the financial account. From the capital account, the basic identity for net lending/borrowing is:

$$NLNB = \text{Net Saving} - \text{Net Capital Formation.}$$

From the financial account, the basic identity for net financial investment is:

$$NFI = \text{Acquisition of Financial Assets} - \text{Incurrence of Liabilities.}$$

Conceptually, *NLNB* equals *NFI*. In practice, the separate compilation of the data for the capital account and financial account leads to a statistical discrepancy.

**8.212** An international consensus on the treatment of this discrepancy does not exist. One approach is to “eliminate” the discrepancy through use of a residual calculation (referred to as a “balancing item”). Alternatively, the amount of the discrepancy can be distributed across one or more items in the capital account, the financial account, or both—treating the discrepancy as a transaction or valuation change or, more likely, as an element of OCVA.

**8.213** The motivation for removal of discrepancies by incorporating them in the accounts is that, by providing “balanced” accounts, an element of ambiguity is eliminated for the users of the financial statistics. However, presentation of data for discrepancies assists users in gauging the relative magnitude of errors and the overall quality of the data. Compilers can provide users with differing data for *NLNB* and *NFI*, while informing users that the one set of data (possibly, those for *NFI* and its components) is relatively more reliable than the other set.

**8.214** Regardless of how the discrepancies are treated in the data that countries release and publish, the record of data discrepancies provides compilers with valuable information for identifying areas that need improvement in the data collection, estimation, and compilation system for the national accounts statistics and, in particular, the financial statistics.

# Appendix I. Illustrative Sectoral Balance Sheets

1. This appendix contains the following illustrative balance sheets:

Table A1.1	Sectoral Balance Sheet for Central Bank
Table A1.2	Sectoral Balance Sheet for Other Depository Corporations
Table A1.3	Sectoral Balance Sheet for Other Financial Corporations

Table A.I.1. Sectoral Balance Sheet for Central Bank

	Opening Stock	Transactions	Valuation Changes	Other Changes in Volume	Closing Stock
<b>Assets</b>					
<b>Monetary gold and SDRs</b>	<b>430</b>	<b>70</b>	<b>47</b>	<b>3</b>	<b>550</b>
Monetary gold	303	26	28	3	360
SDRs	127	44	19		190
<b>Currency and deposits</b>	<b>4,635</b>	<b>2,211</b>	<b>694</b>		<b>7,540</b>
Currency	29	15	3		47
National					
Foreign	29	15	3		47
Transferable deposits	2,605	1,154	391		4,150
In national currency					
– Central bank					
– Other depository corporations					
– Other financial corporations					
– Nonresidents					
In foreign currency	2,605	1,154	391		4,150
– Central bank					
– Other depository corporations					
– Other financial corporations					
– Nonresidents	2,605	1,154	391		4,150
Other deposits	2,001	1,042	300		3,343
In national currency					
– Central bank					
– Other depository corporations					
– Other financial corporations					
– Nonresidents					
In foreign currency	2,001	1,042	300		3,343
– Central bank					
– Other depository corporations					
– Other financial corporations					
– Nonresidents	2,001	1,042	300		3,343
<b>Securities other than shares</b>	<b>7,907</b>	<b>936</b>	<b>1,186</b>		<b>10,029</b>
Central bank					
Other depository corporations					
Other financial corporations		347			347
Central government	4,105	–809	616		3,912
State and local government					
Public nonfinancial corporations		250			250
Other nonfinancial corporations					
Other resident sectors					
Nonresidents	3,802	1,148	570		5,520
<b>Loans</b>	<b>8,665</b>	<b>969</b>	<b>990</b>	<b>–10</b>	<b>10,614</b>
Central bank					
Other depository corporations	1,506	–136			1,370
Other financial corporations	25	7			32
Central government	409	2	14		425
State and local government	33	–6			27
Public nonfinancial corporations	125	–23		–5	97
Other nonfinancial corporations	42	2		–3	41
Other resident sectors	17	–5		–2	10
Nonresidents	6,508	1,128	976		8,612
<b>Shares and other equity</b>	<b>59</b>		<b>2</b>		<b>61</b>
Central bank					
Other depository corporations	59		2		61
Other financial corporations					

Table A I.1 (continued)

	Opening Stock	Transactions	Valuation Changes	Other Changes in Volume	Closing Stock
Public nonfinancial corporations					
Other nonfinancial corporations					
Other resident sectors					
Nonresidents					
<b>Insurance technical reserves</b>	<b>35</b>	<b>5</b>	<b>-1</b>		<b>39</b>
Other financial corporations	16	2			18
Nonresidents	19	3	-1		21
<b>Financial derivatives</b>	<b>936</b>	<b>131</b>	<b>126</b>		<b>1,193</b>
Central bank					
Other depository corporations	75	37	7	2	121
Other financial corporations	46	-8	-1	-2	35
Central government					
State and local government					
Public nonfinancial corporations	35	26	5		66
Other nonfinancial corporations	29	-15	2		16
Other resident sectors					
Nonresidents	751	91	113		955
<b>Other accounts receivable</b>	<b>372</b>	<b>8</b>	<b>-8</b>		<b>372</b>
<b>Trade credit and advances</b>	<b>106</b>	<b>17</b>	<b>-14</b>		<b>109</b>
Central bank					
Other depository corporations	14	-6			8
Other financial corporations	23	4			27
Central government					
State and local government					
Public nonfinancial corporations	19	-2			17
Other nonfinancial corporations	22	8			30
Other resident sectors		6			6
Nonresidents	28	7	-14		21
<b>Other</b>	<b>266</b>	<b>-9</b>	<b>6</b>		<b>263</b>
<b>Resident sectors</b>	<b>39</b>	<b>7</b>	<b>2</b>		<b>48</b>
Dividends receivable					
<b>Settlement accounts</b>	<b>20</b>	<b>10</b>			<b>30</b>
Other depository corporations	4	-3			1
Other financial corporations	6	1			7
Central government	5	3			8
State and local government					
Public nonfinancial corporations	2	3			5
Other nonfinancial corporations					
Other resident sectors	3	6			9
Items in the process of collection	2	-2			0
Miscellaneous asset items	17	-1	2		18
<b>Nonresidents</b>	<b>227</b>	<b>-16</b>	<b>4</b>		<b>215</b>
IMF quota subscription	200				200
Dividends receivable					
Settlement accounts	19	-12			7
Items in the process of collection	2	-1			1
Miscellaneous asset items	6	-3	4		7
<b>Nonfinancial assets</b>	<b>1,222</b>	<b>25</b>	<b>7</b>	<b>-7</b>	<b>1,247</b>
<b>TOTAL ASSETS</b>	<b>24,261</b>	<b>4,355</b>	<b>3,043</b>	<b>-14</b>	<b>31,645</b>

Table A.I.1 (continued)

	Opening Stock	Transactions	Valuation Changes	Other Changes in Volume	Closing Stock
<b>Liabilities</b>					
<b>Currency in circulation</b>	<b>4,007</b>	<b>250</b>			<b>4,257</b>
<b>Deposits included in broad money</b>	<b>3,719</b>	<b>394</b>	<b>8</b>	<b>-3</b>	<b>4,118</b>
<b>Transferable deposits</b>	<b>3,269</b>	<b>423</b>	<b>8</b>	<b>-3</b>	<b>3,697</b>
In national currency	69	20			89
Other financial corporations	21	7			28
State and local government					
Public nonfinancial corporations	48	13			61
Other nonfinancial corporations					
Other resident sectors					
In foreign currency	3,200	403	8	-3	3,608
Other financial corporations	33	10	8	-3	48
State and local government					
Public nonfinancial corporations					
Other nonfinancial corporations					
Other resident sectors	3,167	393			3,560
<b>Other deposits</b>	<b>450</b>	<b>-29</b>			<b>421</b>
In national currency	450	-29			421
Other financial corporations	70	5			75
State and local government	230	-45			185
Public nonfinancial corporations	150	11			161
Other nonfinancial corporations					
Other resident sectors					
In foreign currency					
Other financial corporations					
State and local government					
Public nonfinancial corporations					
Other nonfinancial corporations					
Other resident sectors					
<b>Deposits excluded from broad money</b>	<b>14,188</b>	<b>1,770</b>	<b>-221</b>	<b>3</b>	<b>15,740</b>
<b>Transferable deposits</b>	<b>14,009</b>	<b>1,645</b>	<b>-238</b>	<b>3</b>	<b>15,419</b>
In national currency	13,384	1,278			14,662
Central bank					
Other depository corporations	10,479	1,466			11,945
Other financial corporations					
Central government	1,000	115			1,115
State and local government					
Public nonfinancial corporations					
Other nonfinancial corporations					
Other resident sectors					
Nonresidents	1,905	-303			1,602
In foreign currency	625	367	-238	3	757
Central bank					
Other depository corporations	500	138	-257	3	384
Other financial corporations					
Central government					
State and local government					
Public nonfinancial corporations					
Other nonfinancial corporations					
Other resident sectors					
Nonresidents	125	229	19		373

Table A.I.1 (continued)

	Opening Stock	Transactions	Valuation Changes	Other Changes in Volume	Closing Stock
<b>Other deposits</b>	<b>179</b>	<b>125</b>	<b>17</b>		<b>321</b>
In national currency	64	98			162
Central bank					
Other depository corporations	26	104			130
Other financial corporations					
Central government					
State and local government					
Public nonfinancial corporations					
Other nonfinancial corporations					
Other resident sectors					
Nonresidents	38	-6			32
In foreign currency	115	27	17		159
Central bank					
Other depository corporations	66	1	10		77
Other financial corporations					
Central government					
State and local government					
Public nonfinancial corporations					
Other nonfinancial corporations					
Other resident sectors					
Nonresidents	49	26	7		82
<b>Securities other than shares, included in broad money</b>					
In national currency					
Other financial corporations					
State and local government					
Public nonfinancial corporations					
Other nonfinancial corporations					
Other resident sectors					
In foreign currency					
Other financial corporations					
State and local government					
Public nonfinancial corporations					
Other nonfinancial corporations					
Other resident sectors					
<b>Securities other than shares, excluded from broad money</b>	<b>127</b>	<b>6</b>			<b>133</b>
In national currency	127	6			133
Central bank					
Other depository corporations	50	11			61
Other financial corporations					
Central government					
State and local government					
Public nonfinancial corporations					
Other nonfinancial corporations					
Other resident sectors					
Nonresidents	77	-5			72
In foreign currency					
Central bank					
Other depository corporations					
Other financial corporations					
Central government					
State and local government					
Public nonfinancial corporations					
Other nonfinancial corporations					
Other resident sectors					
Nonresidents					



Table A.I.1 (continued)

	Opening Stock	Transactions	Valuation Changes	Other Changes in Volume	Closing Stock
<b>Loans</b>	<b>1,105</b>		<b>201</b>		<b>1,306</b>
Central bank					
Other depository corporations					
Other financial corporations					
Central government					
State and local government					
Public nonfinancial corporations					
Other nonfinancial corporations					
Other resident sectors					
Nonresidents	1,105		201		1,306
<b>Insurance technical reserves</b>					
Net equity of households in life insurance reserves					
Residents					
Nonresidents					
Net equity of households in pension funds					
Residents					
Nonresidents					
Prepayment of premiums and reserves against outstanding claims					
Central bank					
Other depository corporations					
Other financial corporations					
Central government					
State and local government					
Public nonfinancial corporations					
Other nonfinancial corporations					
Other resident sectors					
Nonresidents					
<b>Financial derivatives</b>	<b>439</b>	<b>43</b>	<b>210</b>		<b>692</b>
Central bank					
Other depository corporations	234	27	27	2	290
Other financial corporations	22	-5	2	-2	17
Central government					
State and local government					
Public nonfinancial corporations	31	4	1		36
Other nonfinancial corporations	26	-2	5		29
Other resident sectors					
Nonresidents	126	19	175		320
<b>Other accounts payable</b>	<b>288</b>	<b>52</b>	<b>-16</b>	<b>-10</b>	<b>314</b>
<b>Trade credit and advances</b>	<b>166</b>	<b>-3</b>	<b>5</b>		<b>168</b>
Central bank					
Other depository corporations	32	-11			21
Other financial corporations	24	11			35
Central government	16	7			23
State and local government	14	-3			11
Public nonfinancial corporations	23	9			32
Other nonfinancial corporations	21	-2			19
Other resident sectors					
Nonresidents	36	-14	5		27

Table A.I.1 (continued)

	Opening Stock	Transactions	Valuation Changes	Other Changes in Volume	Closing Stock
<b>Other</b>	122	55	-21	-10	146
<b>Resident sectors</b>	69	67	12	-10	138
Provisions for losses on impaired financial assets	37	75		-10	102
Accumulated depreciation and impairment losses (nonfin.)					
Consolidation adjustment for headquarters and branches	3	-4	5		4
Dividends payable					
<b>Settlements accounts</b>	15	-1			14
Other depository corporations	3	-3			0
Other financial corporations	4	2			6
Central government	2	3			5
State and local government					
Public nonfinancial corporations	4	-2			2
Other nonfinancial corporations					
Other resident sectors	2	-1			1
Miscellaneous liability items	14	-3	7		18
<b>Nonresidents</b>	53	-12	-33		8
Dividends payable					
Settlements accounts	12	-9			3
Miscellaneous liability items	41	-3	-33		5
<b>Shares and other equity</b>	<b>388</b>	<b>1,840</b>	<b>2,861</b>	<b>-4</b>	<b>5,085</b>
Funds contributed by owners	122				122
Retained earnings	95	1,840	2,320	-13	4,242
General and special reserves	46			9	55
SDR allocations	37		8		45
Valuation adjustment	88		533		621
<b>TOTAL LIABILITIES</b>	<b>24,261</b>	<b>4,355</b>	<b>3,043</b>	<b>-14</b>	<b>31,645</b>
<b>Memorandum Items</b>					
<b>Assets</b>					
<b>1. Central bank float (applicable to central bank only)</b>	<b>133</b>	<b>45</b>			<b>178</b>
<b>2. Loans: of which accrued interest</b>	<b>170</b>	<b>42</b>			<b>212</b>
<b>3. Loans: of which interest and principal arrears</b>	<b>1</b>				<b>1</b>
<b>4. Loans: of which expected losses</b>	<b>10</b>				<b>10</b>
Other depository corporations					
Other financial corporations					
Central government					
State and local government					
Public nonfinancial corporations	10				10
Other nonfinancial corporations					
Other resident sectors					
Nonresidents					
<b>5. Securities other than shares: of which accrued interest</b>	<b>25</b>				<b>27</b>

Table A.I.1 (concluded)

	Opening Stock	Transactions	Valuation Changes	Other Changes in Volume	Closing Stock
<b>6. Claims on ODCs in liquidation or reorganization (closed institutions)</b>					
Transferable deposits					
Other deposits					
Securities other than shares					
Loans					
Shares and other equity					
Financial derivatives					
Other accounts receivable					
<b>7. Claims on OFCs in liquidation or reorganization (closed institutions)</b>					
Transferable deposits					
Other deposits					
Securities other than shares					
Loans					
Shares and other equity					
Financial derivatives					
Other accounts receivable					
<b>Liabilities</b>					
<b>1. Loans: of which accrued interest</b>	<b>2</b>	<b>1</b>			<b>3</b>
<b>2. Loans: of which interest and principal arrears</b>					
Of which: Loans from IMF					
<b>3. Securities other than shares: of which accrued interest</b>	<b>2</b>				<b>3</b>
<b>4. Shares and other equity: market value, by holding sector</b>	<b>100</b>				<b>100</b>
Other depository corporations					
Other financial corporations					
Central government	100				100
State and local government					
Public nonfinancial corporations					
Other nonfinancial corporations					
Other resident sectors					
Nonresidents					
<b>5. Liabilities to ODCs in liquidation or reorganization (closed institutions)</b>					
Transferable deposits					
Other deposits					
Securities other than shares					
Loans					
Financial derivatives					
Other accounts payable					
<b>6. Liabilities to OFCs in liquidation or reorganization (closed institutions)</b>					
Transferable deposits					
Other deposits					
Securities other than shares					
Loans					
Financial derivatives					
Other accounts payable					

Table A I.2. Sectoral Balance Sheet for Other Depository Corporations

	Opening Stock	Transactions	Valuation Changes	Other Changes in Volume	Closing Stock
<b>Assets</b>					
<b>Monetary gold and SDRs</b>					
Monetary gold					
SDRs					
<b>Currency and deposits</b>	<b>26,070</b>	<b>4,161</b>	<b>2,212</b>	<b>24</b>	<b>32,467</b>
Currency	1,591	283	141	5	2,020
National	357	69		2	428
Foreign	1,234	214	141	3	1,592
Transferable deposits	23,119	3,264	1,874	13	28,270
In national currency	10,589	1,420		11	12,020
– Central bank	10,375	1,454		1	11,830
– Other depository corporations	214	–34		10	190
– Other financial corporations					
– Nonresidents					
In foreign currency	12,530	1,844	1,874	2	16,250
– Central bank	500	138	–246	1	393
– Other depository corporations	29	3	–1	1	32
– Other financial corporations					
– Nonresidents	12,001	1,703	2,121		15,825
Other deposits	1,360	614	197	6	2,177
In national currency	41	105		3	149
– Central bank	26	100		2	128
– Other depository corporations	15	5		1	21
– Other financial corporations					
– Nonresidents					
In foreign currency	1,319	509	197	3	2,028
– Central bank	66	1	10		77
– Other depository corporations	8	–2		3	9
– Other financial corporations					
– Nonresidents	1,245	510	187		1,942
<b>Securities other than shares</b>	<b>9,432</b>	<b>2,632</b>	<b>137</b>	<b>28</b>	<b>12,229</b>
Central bank	50	11			61
Other depository corporations	85	4		2	91
Other financial corporations	32	6	3	1	42
Central government	8,796	2,605	99	6	11,506
State and local government	112	–9		2	105
Public nonfinancial corporations	4		–4	3	3
Other nonfinancial corporations	13	8	–12	14	23
Other resident sectors					
Nonresidents	340	7	51		398
<b>Loans</b>	<b>98,136</b>	<b>300</b>	<b>589</b>	<b>–523</b>	<b>98,502</b>
Central bank					
Other depository corporations					
Other financial corporations	11	–5			6
Central government					
State and local government	12	5			17
Public nonfinancial corporations	5,696	200	66	–54	5,908
Other nonfinancial corporations	71,789	–486	278	–296	71,285
Other resident sectors	20,216	555	175	–175	20,771
Nonresidents	412	31	70	2	515
<b>Shares and other equity</b>	<b>226</b>	<b>107</b>	<b>9</b>	<b>4</b>	<b>346</b>
Central bank					
Other depository corporations					
Other financial corporations	65		–9		56
Public nonfinancial corporations	13		1		14

Table A1.2 (continued)

	Opening Stock	Transactions	Valuation Changes	Other Changes in Volume	Closing Stock
Other nonfinancial corporations	24		1	1	26
Other resident sectors					
Nonresidents	124	107	16	3	250
<b>Insurance technical reserves</b>	<b>20</b>				<b>20</b>
Other financial corporations	14	2			16
Nonresidents	6	-2			4
<b>Financial derivatives</b>	<b>387</b>	<b>31</b>	<b>42</b>	<b>4</b>	<b>464</b>
Central bank	232	27	28		287
Other depository corporations	45	-3	2	2	46
Other financial corporations	32	4	6		42
Central government					
State and local government					
Public nonfinancial corporations	23	5	6		34
Other nonfinancial corporations	20	10	5		35
Other resident sectors					
Nonresidents	35	-12	-5	2	20
<b>Other accounts receivable</b>	<b>314</b>	<b>12</b>	<b>3</b>	<b>5</b>	<b>334</b>
<b>Trade credit and advances</b>	<b>129</b>	<b>16</b>		<b>3</b>	<b>148</b>
Central bank	32	2			34
Other depository corporations	23	-3			20
Other financial corporations	6	-2		1	5
Central government	9	1			10
State and local government	4	6			10
Public nonfinancial corporations	2	3			5
Other nonfinancial corporations	33	10		2	45
Other resident sectors	5	4			9
Nonresidents	15	-5			10
<b>Other</b>	<b>185</b>	<b>-4</b>	<b>3</b>	<b>2</b>	<b>186</b>
<b>Resident sectors</b>	<b>117</b>	<b>-18</b>	<b>3</b>		<b>102</b>
Dividends receivable	19	-3	1		17
<b>Settlement accounts</b>	<b>78</b>	<b>-17</b>	<b>-4</b>		<b>57</b>
Central bank	3	-3			0
Other depository corporations	7	2	-4		5
Other financial corporations	9	6			15
Central government					
State and local government	11	-5			6
Public nonfinancial corporations	8	-2			6
Other nonfinancial corporations	24	-11			13
Other resident sectors	16	-4			12
Items in the process of collection	9	-2			7
Miscellaneous asset items	11	4	6		21
<b>Nonresidents</b>	<b>68</b>	<b>14</b>		<b>2</b>	<b>84</b>
Dividends receivable	18	3			21
Settlement accounts	25	-12		2	15
Items in the process of collection	4	-2			2
Miscellaneous asset items	21	25			46
<b>Nonfinancial assets</b>	<b>15,555</b>	<b>1,246</b>	<b>213</b>	<b>-3</b>	<b>17,011</b>
<b>TOTAL ASSETS</b>	<b>150,140</b>	<b>8,489</b>	<b>3,205</b>	<b>-461</b>	<b>161,373</b>

Table A I.2 (continued)

	Opening Stock	Transactions	Valuation Changes	Other Changes in Volume	Closing Stock
<b>Liabilities</b>					
<b>Currency in circulation</b>					
<b>Deposits included in broad money</b>	<b>91,417</b>	<b>2,775</b>	<b>2,520</b>	<b>7</b>	<b>96,719</b>
<b>Transferable deposits</b>	<b>39,398</b>	<b>4,120</b>	<b>31</b>	<b>7</b>	<b>43,556</b>
In national currency	39,196	4,118		7	43,321
Other financial corporations	8,675	867			9,542
State and local government	436	44			480
Public nonfinancial corporations	6,510	826			7,336
Other nonfinancial corporations	12,924	1,312		7	14,243
Other resident sectors	10,651	1,069			11,720
In foreign currency	202	2	31		235
Other financial corporations	34	3	5		42
State and local government	12	1	2		15
Public nonfinancial corporations	24	-3	4		25
Other nonfinancial corporations	78	8	12		98
Other resident sectors	54	-7	8		55
<b>Other deposits</b>	<b>52,019</b>	<b>-1,345</b>	<b>2,489</b>		<b>53,163</b>
In national currency	35,429	-1,708			33,721
Other financial corporations	37	4			41
State and local government	46	-2			44
Public nonfinancial corporations	103	12			115
Other nonfinancial corporations	12,367	-1,744			10,623
Other resident sectors	22,876	22			22,898
In foreign currency	16,590	363	2,489		19,442
Other financial corporations	23	5	3		31
State and local government	8		1		9
Public nonfinancial corporations	17	-3	3		17
Other nonfinancial corporations	2,645	14	397		3,056
Other resident sectors	13,897	347	2,085		16,329
<b>Deposits excluded from broad money</b>	<b>3,595</b>	<b>206</b>	<b>159</b>		<b>3,960</b>
<b>Transferable deposits</b>	<b>2,524</b>	<b>155</b>	<b>46</b>		<b>2,725</b>
In national currency	2,210	128			2,338
Central bank					
Other depository corporations	216	14			230
Other financial corporations	277	-12			265
Central government	35	3			38
State and local government	14	-2			12
Public nonfinancial corporations	52	5			57
Other nonfinancial corporations	278	-7			271
Other resident sectors	168	9			177
Nonresidents	1,170	118			1,288
In foreign currency	314	27	46		387
Central bank					
Other depository corporations	35	8	5		48
Other financial corporations	27	-6	4		25
Central government	3				3
State and local government	16	8	2		26
Public nonfinancial corporations	34	-12	5		27
Other nonfinancial corporations	84	14	13		111
Other resident sectors	88	-7	13		94
Nonresidents	27	22	4		53

Table A1.2 (continued)

	Opening Stock	Transactions	Valuation Changes	Other Changes in Volume	Closing Stock
<b>Other deposits</b>	<b>1,071</b>	<b>51</b>	<b>113</b>		<b>1,235</b>
In national currency	310	15			325
Central bank					
Other depository corporations	15	-4			11
Other financial corporations	5	3			8
Central government	9	-5			4
State and local government	3	4			7
Public nonfinancial corporations	4	7			11
Other nonfinancial corporations	7	-6			1
Other resident sectors	9	9			18
Nonresidents	258	7			265
In foreign currency	761	36	113		910
Central bank					
Other depository corporations	8	11	1		20
Other financial corporations	3	5			8
Central government	9	-5	1		5
State and local government	5	3	1		9
Public nonfinancial corporations	2				2
Other nonfinancial corporations	4	2	1		7
Other resident sectors	7	-4	1		4
Nonresidents	723	24	108		855
<b>Securities other than shares, included in broad money</b>	<b>27,097</b>	<b>37</b>	<b>4,166</b>	<b>17</b>	<b>31,317</b>
In national currency	26,426	27	4,040	17	30,510
Other financial corporations	77	6	17		100
State and local government	9	-2	1		8
Public nonfinancial corporations	458	7	80		545
Other nonfinancial corporations	13,425	29	2,043	1	15,498
Other resident sectors	12,457	-13	1,899	16	14,359
In foreign currency	671	10	126		807
Other financial corporations	24	2	7		33
State and local government	12	-5	2		9
Public nonfinancial corporations	15	7	4		26
Other nonfinancial corporations	275	22	51		348
Other resident sectors	345	-16	62		391
<b>Securities other than shares, excluded from broad money</b>	<b>1,705</b>	<b>111</b>	<b>340</b>	<b>9</b>	<b>2,165</b>
In national currency	1,218	75	254	8	1,555
Central bank					
Other depository corporations	35	2	5		42
Other financial corporations	74	2	14	2	92
Central government					
State and local government	12	3	2		17
Public nonfinancial corporations	45	-3	11	1	54
Other nonfinancial corporations	87	-2	21	2	108
Other resident sectors	96	95	24		215
Nonresidents	869	-22	177	3	1,027
In foreign currency	487	36	86	1	610
Central bank					
Other depository corporations	55	10	13		78
Other financial corporations	32	9	5		46
Central government					
State and local government	24	-6	9		27
Public nonfinancial corporations	43	12	6		61
Other nonfinancial corporations	55	4	12	1	72
Other resident sectors	62	-7	9		64
Nonresidents	216	14	32		262

Table A I.2 (continued)

	Opening Stock	Transactions	Valuation Changes	Other Changes in Volume	Closing Stock
<b>Loans</b>	<b>2,154</b>	<b>-128</b>	<b>-2</b>	<b>-4</b>	<b>2,020</b>
Central bank	1,506	22			1,528
Other depository corporations					
Other financial corporations					
Central government	45			1	46
State and local government					
Public nonfinancial corporations					
Other nonfinancial corporations	7			-7	0
Other resident sectors					
Nonresidents	596	-150	-2	2	446
<b>Insurance technical reserves</b>					
Net equity of households in life insurance reserves					
Residents					
Nonresidents					
Net equity of households in pension funds					
Residents					
Nonresidents					
Prepayment of premiums and reserves against outstanding claims					
Central bank					
Other depository corporations					
Other financial corporations					
Central government					
State and local government					
Public nonfinancial corporations					
Other nonfinancial corporations					
Other resident sectors					
Nonresidents					
<b>Financial derivatives</b>	<b>340</b>	<b>-1</b>	<b>94</b>	<b>7</b>	<b>440</b>
Central bank	75	5	13	2	95
Other depository corporations	45	-8	34	2	73
Other financial corporations	12	2	-2		12
Central government					
State and local government					
Public nonfinancial corporations	14	7		2	23
Other nonfinancial corporations	23	-5	-1		17
Other resident sectors	59	12	19		90
Nonresidents	112	-14	31	1	130
<b>Other accounts payable</b>	<b>3,732</b>	<b>239</b>	<b>-12</b>	<b>-538</b>	<b>3,421</b>
<b>Trade credit and advances</b>	<b>106</b>	<b>22</b>		<b>3</b>	<b>131</b>
Central bank	14	4			18
Other depository corporations	23	6			29
Other financial corporations	4	8			12
Central government	7	5			12
State and local government	5	3			8
Public nonfinancial corporations	6	-3		1	4
Other nonfinancial corporations	15	-9		2	8
Other resident sectors					
Nonresidents	32	8			40



Table A1.2 (continued)

	Opening Stock	Transactions	Valuation Changes	Other Changes in Volume	Closing Stock
<b>Other</b>	<b>3,626</b>	<b>217</b>	<b>-12</b>	<b>-541</b>	<b>3,290</b>
<b>Resident sectors</b>	1,873	-37		-541	1,295
Provisions for losses on impaired financial assets	1,401	15		-541	875
Accumulated depreciation and impairment losses (nonfin.)	189	-11			178
Consolidation adjustment for headquarters and branches	7	-2			5
Dividends payable	27	-6			21
<b>Settlement accounts</b>	125	-43			82
Central bank	4	-3			1
Other depository corporations	7	2			9
Other financial corporations	12	-3			9
Central government					
State and local government	3	-2			1
Public nonfinancial corporations	20	-8			12
Other nonfinancial corporations	53	-35			18
Other resident sectors	26	6			32
Miscellaneous liability items	124	10			134
<b>Nonresidents</b>	1,753	254	-12		1,995
Dividends payable	1,643	240	-12		1,871
Settlements accounts	68	9			77
Miscellaneous liability items	42	5			47
<b>Shares and other equity</b>	<b>20,100</b>	<b>5,250</b>	<b>-4,060</b>	<b>41</b>	<b>21,331</b>
Funds contributed by owners	7,896			24	7,920
Retained earnings	6,342	5,250	-3,530	-5	8,057
General and special reserves	4,732			22	4,754
SDR allocations					
Valuation adjustment	1,130		-530		600
<b>TOTAL LIABILITIES</b>	<b>150,140</b>	<b>8,489</b>	<b>3,205</b>	<b>-461</b>	<b>161,373</b>
<b>Memorandum Items</b>					
<b>Assets</b>					
<b>1. Loans: of which accrued interest</b>	<b>1,960</b>	<b>30</b>			<b>1,990</b>
<b>2. Loans: of which interest and principal arrears</b>	<b>19</b>				<b>19</b>
<b>3. Loans: of which expected losses</b>	<b>143</b>				<b>143</b>
Other depository corporations					
Other financial corporations					
Central government					
State and local government					
Public nonfinancial corporations	10				10
Other nonfinancial corporations	70				70
Other resident sectors	60				60
Nonresidents	3				3
<b>4. Securities other than shares: of which accrued interest</b>	<b>29</b>				<b>31</b>
<b>5. Claims on ODCs in liquidation or reorganization (closed institutions)</b>					
Transferable deposits					
Other deposits					
Securities other than shares					

Table A I.2 (concluded)

	Opening Stock	Transactions	Valuation Changes	Other Changes in Volume	Closing Stock
Loans					
Shares and other equity					
Financial derivatives					
Other accounts receivable					
<b>6. Claims on OFCs in liquidation or reorganization (closed institutions)</b>					
Transferable deposits					
Other deposits					
Securities other than shares					
Loans					
Shares and other equity					
Financial derivatives					
Other accounts receivable					
<b>Liabilities</b>					
<b>1. Loans: of which accrued interest</b>	<b>12</b>				<b>12</b>
<b>2. Loans: of which interest and principal arrears</b>	<b>2</b>				<b>2</b>
<b>3. Securities other than shares: of which accrued interest</b>	<b>111</b>				<b>114</b>
<b>4. Shares and other equity: market value, by holding sector</b>	<b>4,500</b>		<b>450</b>		<b>4,950</b>
Central bank					
Other depository corporations	150	-50	15		115
Other financial corporations	350		35		385
Central government					
State and local government					
Public nonfinancial corporations					
Other nonfinancial corporations					
Other resident sectors	2,500	50	250		2,800
Nonresidents	1,500		150		1,650
<b>5. Liabilities to ODCs in liquidation or reorganization (closed institutions)</b>					
Transferable deposits					
Other deposits					
Securities other than shares					
Loans					
Financial derivatives					
Other accounts payable					
<b>6. Liabilities to OFCs in liquidation or reorganization (closed institutions)</b>					
Transferable deposits					
Other deposits					
Securities other than shares					
Loans					
Financial derivatives					
Other accounts payable					

Table A1.3. Sectoral Balance Sheet for Other Financial Corporations

	Opening Stock	Transactions	Valuation Changes	Other Changes in Volume	Closing Stock
<b>Assets</b>					
<b>Monetary Gold and SDRs</b>					
Monetary gold					
SDRs					
<b>Currency and deposits</b>	<b>11,314</b>	<b>1,299</b>	<b>325</b>	<b>-24</b>	<b>12,914</b>
Currency	885	8	117	-5	1,005
National	123	-14		-2	107
Foreign	762	22	117	-3	898
Transferable deposits	10,150	1,343	183	-13	11,663
In national currency	8,947	858		-11	9,794
- Central bank	19	2		-1	20
- Other depository corporations	8,928	856		-10	9,774
- Other financial corporations					
- Nonresidents					
In foreign currency	1,203	485	183	-2	1,869
- Central bank	31	3	6	-1	39
- Other depository corporations	61	6	10	-1	76
- Other financial corporations					
- Nonresidents	1,111	476	167		1,754
Other deposits	279	-52	25	-6	246
In national currency	112	-28		-3	81
- Central bank	70	-22		-2	46
- Other depository corporations	42	-6		-1	35
- Other financial corporations					
- Nonresidents					
In foreign currency	167	-24	25	-3	165
- Central bank					
- Other depository corporations	26	13	4	-3	40
- Other financial corporations					
- Nonresidents	141	-37	21		125
<b>Securities other than shares</b>	<b>114,533</b>	<b>6,952</b>	<b>1,838</b>	<b>-23</b>	<b>123,300</b>
Central bank					
Other depository corporations	207	15	4	-2	224
Other financial corporations	71	16	2	-1	88
Central government	22,676	458	12	-6	23,140
State and local government	3,269	132	4	-2	3,403
Public nonfinancial corporations	3,024	-145	6	-3	2,882
Other nonfinancial corporations	72,897	4,763	10	-6	77,664
Other resident sectors					
Nonresidents	12,389	1,713	1,800	-3	15,899
<b>Loans</b>	<b>13,760</b>	<b>54</b>	<b>92</b>	<b>-76</b>	<b>13,830</b>
Central bank					
Other depository corporations					
Other financial corporations	22	4			26
Central government					
State and local government					
Public nonfinancial corporations	5,402	-167	15	-30	5,220
Other nonfinancial corporations	4,567	146	10	-25	4,698
Other resident sectors	3,257	88	8	-19	3,334
Nonresidents	512	-17	59	-2	552
<b>Shares and other equity</b>	<b>118</b>	<b>61</b>	<b>-1</b>	<b>-2</b>	<b>176</b>
Central bank					
Other depository corporations	12	11			23
Other financial corporations	8				8

Table A I.3 (continued)

	Opening Stock	Transactions	Valuation Changes	Other Changes in Volume	Closing Stock
Public nonfinancial corporations					
Other nonfinancial corporations	56	7	-10	1	54
Other resident sectors					
Nonresidents	42	43	9	-3	91
<b>Insurance technical reserves</b>	<b>25</b>	<b>3</b>			<b>28</b>
Other financial corporations	18	2			20
Nonresidents	7	1			8
<b>Financial derivatives</b>	<b>135</b>	<b>130</b>	<b>6</b>	<b>-4</b>	<b>267</b>
Central bank	22	9			31
Other depository corporations	12	25	-1	-2	34
Other financial corporations	33	-6			27
Central government					
State and local government	2	4			6
Public nonfinancial corporations	12	3			15
Other nonfinancial corporations	22	-10			12
Other resident sectors					
Nonresidents	32	105	7	-2	142
<b>Other accounts receivable</b>	<b>1,006</b>	<b>47</b>	<b>-21</b>	<b>-5</b>	<b>1,027</b>
<b>Trade credit and advances</b>	<b>121</b>	<b>7</b>	<b>-1</b>	<b>-3</b>	<b>124</b>
Central bank	24	3			27
Other depository corporations	4	1			5
Other financial corporations	14	5	1	-1	19
Central government					
State and local government	17	11	-4		24
Public nonfinancial corporations	13	7			20
Other nonfinancial corporations	22	-8	2	-2	14
Other resident sectors					
Nonresidents	27	-12			15
<b>Other</b>	<b>885</b>	<b>40</b>	<b>-20</b>	<b>-2</b>	<b>903</b>
<b>Resident sectors</b>	<b>155</b>	<b>24</b>	<b>-4</b>		<b>175</b>
Dividends receivable	62	9			71
<b>Settlement accounts</b>	<b>51</b>	<b>6</b>			<b>57</b>
Central bank	4	2			6
Other depository corporations	12	-3			9
Other financial corporations	9	-3			6
Central government					
State and local government					
Public nonfinancial corporations	4	-1			3
Other nonfinancial corporations	20	12			32
Other resident sectors	2	-1			1
Items in the process of collection	4	-2			2
Miscellaneous asset items	38	11	-4		45
<b>Nonresidents</b>	<b>730</b>	<b>16</b>	<b>-16</b>	<b>-2</b>	<b>728</b>
Dividends receivable	648	8	-16	-2	638
Settlement accounts	42	-4			38
Items in the process of collection	4				4
Miscellaneous asset items	36	12			48
<b>Nonfinancial assets</b>	<b>11,111</b>	<b>33</b>	<b>-6</b>	<b>-2</b>	<b>11,136</b>
<b>TOTAL ASSETS</b>	<b>152,002</b>	<b>8,579</b>	<b>2,233</b>	<b>-136</b>	<b>162,678</b>
<b>VERTICAL CHECK: ASSETS-LIABILITIES</b>			<b>0</b>		

Table A I.3 (continued)

	Opening Stock	Transactions	Valuation Changes	Other Changes in Volume	Closing Stock
<b>Liabilities</b>					
<b>Currency in circulation</b>					
<b>Deposits included in broad money</b>					
<b>Transferable deposits</b>					
In national currency					
Other financial corporations					
State and local government					
Public nonfinancial corporations					
Other nonfinancial corporations					
Other resident sectors					
In foreign currency					
Other financial corporations					
State and local government					
Public nonfinancial corporations					
Other nonfinancial corporations					
Other resident sectors					
<b>Other deposits</b>					
In national currency					
Other financial corporations					
State and local government					
Public nonfinancial corporations					
Other nonfinancial corporations					
Other resident sectors					
In foreign currency					
Other financial corporations					
State and local government					
Public nonfinancial corporations					
Other nonfinancial corporations					
Other resident sectors					
<b>Deposits excluded from broad money</b>					
<b>Transferable deposits</b>					
In national currency					
Central bank					
Other depository corporations					
Other financial corporations					
Central government					
State and local government					
Public nonfinancial corporations					
Other nonfinancial corporations					
Other resident sectors					
Nonresidents					
In foreign currency					
Central bank					
Other depository corporations					
Other financial corporations					
Central government					
State and local government					
Public nonfinancial corporations					
Other nonfinancial corporations					
Other resident sectors					
Nonresidents					

Table A I.3 (continued)

	Opening Stock	Transactions	Valuation Changes	Other Changes in Volume	Closing Stock
<b>Other deposits</b>					
In national currency					
Central bank					
Other depository corporations					
Other financial corporations					
Central government					
State and local government					
Public nonfinancial corporations					
Other nonfinancial corporations					
Other resident sectors					
Nonresidents					
In foreign currency					
Central bank					
Other depository corporations					
Other financial corporations					
Central government					
State and local government					
Public nonfinancial corporations					
Other nonfinancial corporations					
Other resident sectors					
Nonresidents					
<b>Securities other than shares, included in broad money</b>					
In national currency					
Other financial corporations					
State and local government					
Public nonfinancial corporations					
Other nonfinancial corporations					
Other resident sectors					
In foreign currency					
Other financial corporations					
State and local government					
Public nonfinancial corporations					
Other nonfinancial corporations					
Other resident sectors					
<b>Securities other than shares, excluded from broad money</b>	<b>418</b>	<b>72</b>	<b>-49</b>	<b>-26</b>	<b>415</b>
In national currency	372	44	-35	-25	356
Central bank					
Other depository corporations	3	6			9
Other financial corporations	59	26	-13	-2	70
Central government					
State and local government	21	-6			15
Public nonfinancial corporations	45	-12	-4	-1	28
Other nonfinancial corporations	112	9	-1	-3	117
Other resident sectors	77	14		-16	75
Nonresidents	55	7	-17	-3	42
In foreign currency	46	28	-14	-1	59
Central bank					
Other depository corporations					
Other financial corporations	12	10	-4		18
Central government					
State and local government	6	2	-2		6
Public nonfinancial corporations	7	3	-3		7
Other nonfinancial corporations	9	8	-1	-1	15
Other resident sectors	8	4	-2		10
Nonresidents	4	1	-2		3

Table A1.3 (continued)

	Opening Stock	Transactions	Valuation Changes	Other Changes in Volume	Closing Stock
<b>Loans</b>	<b>74</b>	<b>7</b>	<b>7</b>	<b>-3</b>	<b>85</b>
Central bank	25	-7	4		22
Other depository corporations	11	-3			8
Other financial corporations	22	10			32
Central government			1	-1	
State and local government					
Public nonfinancial corporations					
Other nonfinancial corporations	5	4	-2		7
Other resident sectors					
Nonresidents	11	3	4	-2	16
<b>Insurance technical reserves</b>	<b>139,369</b>	<b>7,124</b>	<b>1,664</b>		<b>148,157</b>
Net equity of households in life insurance reserves	31,122	2,377			33,499
Residents	22,357	2,221			24,578
Nonresidents	8,765	156			8,921
Net equity of households in pension funds	100,211	4,387	1,664		106,262
Residents	99,999	4,365	1,623		105,987
Nonresidents	212	22	41		275
Prepayment of premiums and reserves against outstanding claims	8,036	360			8,396
Central bank	16	5			21
Other depository corporations	14	9			23
Other financial corporations	18	7			25
Central government	16	3			19
State and local government	11	6			17
Public nonfinancial corporations	45	12			57
Other nonfinancial corporations	1,785	124			1,909
Other resident sectors	4,875	89			4,964
Nonresidents	1,256	105			1,361
<b>Financial derivatives</b>	<b>134</b>	<b>32</b>	<b>26</b>	<b>-7</b>	<b>185</b>
Central bank	46	9	7	-2	60
Other depository corporations	32	12	5		49
Other financial corporations	33	-7	7	-2	31
Central government					
State and local government					
Public nonfinancial corporations	4	5	3	-2	10
Other nonfinancial corporations	7		1		8
Other resident sectors					
Nonresidents	12	13	3	-1	27
<b>Other accounts payable</b>	<b>671</b>	<b>194</b>	<b>50</b>	<b>-51</b>	<b>864</b>
<b>Trade credit and advances</b>	<b>121</b>	<b>12</b>		<b>-3</b>	<b>130</b>
Central bank	23	2			25
Other depository corporations	6	4			10
Other financial corporations	14	-6			8
Central government	11	8			19
State and local government	7	-3			4
Public nonfinancial corporations	8	5		-1	12
Other nonfinancial corporations	37	-7		-2	28
Other resident sectors					
Nonresidents	15	9			24
<b>Other</b>	<b>550</b>	<b>182</b>	<b>50</b>	<b>-48</b>	<b>734</b>
<b>Resident sectors</b>	<b>187</b>	<b>148</b>	<b>40</b>	<b>-48</b>	<b>327</b>
Provisions for losses on impaired financial assets	78	87		-48	117
Accumulated depreciation and impairment losses (nonfin.)	14	25	32		71

Table A I.3 (continued)

	Opening Stock	Transactions	Valuation Changes	Other Changes in Volume	Closing Stock
Consolidation adjustment for headquarters and branches	1	2			3
Dividends payable	32	-3			29
<b>Settlements accounts</b>	50	23			73
Central bank	6	1			7
Other depository corporations	9	6			15
Other financial corporations					
Central government					
State and local government					
Public nonfinancial corporations		3			3
Other nonfinancial corporations	21	15			36
Other resident sectors	14	-2			12
Miscellaneous liability items	12	14	8		34
<b>Nonresidents</b>	363	34	10		407
Dividends payable	318	22			340
Settlements accounts	18	4			22
Miscellaneous liability items	27	8	10		45
<b>Shares and other equity</b>	<b>11,336</b>	<b>1,150</b>	<b>535</b>	<b>-49</b>	<b>12,972</b>
Funds contributed by owners	5,676			-24	5,652
Retained earnings	4,572	1,150	450	-27	6,145
General and special reserves	432			2	434
SDR allocations					
Valuation adjustment	656		85		741
<b>TOTAL LIABILITIES</b>	<b>152,002</b>	<b>8,579</b>	<b>2,233</b>	<b>-136</b>	<b>162,678</b>
<b>Memorandum Items</b>					
<b>Assets</b>					
<b>1. Loans: of which accrued interest</b>	<b>275</b>	<b>5</b>			<b>280</b>
<b>2. Loans: of which interest and principal arrears</b>	<b>16</b>				<b>16</b>
<b>3. Loans: of which expected losses</b>	<b>12</b>				<b>12</b>
Central bank					
Other depository corporations					
Other financial corporations					
Central government					
State and local government					
Public nonfinancial corporations	4				4
Other nonfinancial corporations	5				5
Other resident sectors	2				2
Nonresidents	1				1
<b>4. Securities other than shares: of which accrued interest</b>	<b>153</b>				<b>164</b>
<b>5. Claims on ODCs in liquidation or reorganization (closed institutions)</b>					
Transferable deposits					
Other deposits					
Securities other than shares					
Loans					
Shares and other equity					
Financial derivatives					
Other accounts receivable					



Table A I.3 (concluded)

	Opening Stock	Transactions	Valuation Changes	Other Changes in Volume	Closing Stock
<b>6. Claims on OFCs in liquidation or reorganization (closed institutions)</b>					
Transferable deposits					
Other deposits					
Securities other than shares					
Loans					
Shares and other equity					
Financial derivatives					
Other accounts receivable					
<b>Liabilities</b>					
<b>1. Loans: of which accrued interest</b>	<b>3</b>	<b>1</b>			<b>4</b>
<b>2. Loans: of which interest and principal arrears</b>	<b>1</b>				<b>1</b>
<b>3. Securities other than shares: of which accrued interest</b>	<b>1</b>				<b>2</b>
<b>4. Shares and other equity: market value, by holding sector</b>	<b>2,900</b>		<b>290</b>		<b>3,190</b>
Central bank					
Other depository corporations	400		40		440
Other financial corporations	200	100	20		320
Central government					
State and local government					
Public nonfinancial corporations					
Other nonfinancial corporations	800	100	80		980
Other resident sectors	1,000	-200	100		900
Nonresidents	500		50		550
<b>5. Liabilities to ODCs in liquidation or reorganization (closed institutions)</b>					
Transferable deposits					
Other deposits					
Securities other than shares					
Loans					
Financial derivatives					
Other accounts payable					
<b>6. Liabilities to OFCs in liquidation or reorganization (closed institutions)</b>					
Transferable deposits					
Other deposits					
Securities other than shares					
Loans					
Financial derivatives					
Other accounts payable					

## Appendix II. Standardized Report Forms

### Guidelines for Completion of Standardized Report Forms 1SR, 2SR, and 4SR for Reporting Monetary Data to the IMF

#### Submission of Report Forms

1. The report forms  
1SR—CENTRAL BANK,  
2SR—OTHER DEPOSITORY  
CORPORATIONS,  
4SR—OTHER FINANCIAL  
CORPORATIONS, and  
5SR—MONETARY AGGREGATES

(hereafter, reports) should be submitted as soon as possible following the end of the reporting period; for example, immediately after the data are finalized and prepared for dissemination. The reports should be transmitted electronically to the Statistics Department of the International Monetary Fund using the Integrated Correspondence System (ICS). For information about the ICS, please contact ICSINQUIRY@IMF.ORG. The Statistics Department strongly prefers that all data be transmitted using the ICS; however, if this method cannot be implemented, data may be sent by electronic mail, fax, or regular mail.

#### Coverage and Structure of Report Forms

2. All assets and liabilities must be reported according to the *residency* of customers and expressed in *national currency units*. In addition, domestic assets and liabilities should be disaggregated by the *sector* in which the customer is included in the economy (as indicated in the section on sectors, below).

3. For issues that cannot be resolved internally, the staff of the central bank in the reporting country who are responsible for the completion of the reports should confer with the IMF Statistics Department. When completed, the reports should show all assets and liabilities (including shares and other equity) as of the end of the reporting period. Furthermore,

the various categories of assets and liabilities of the reports should sum to total assets and total liabilities.

4. **Report 1SR.** Include data for the central bank (the accounts of the central bank headquarters and branches and, if applicable, the currency board or independent currency authority that issues national currency). If the monetary authorities' functions are performed outside the central bank, these should be reported as supplementary data. These would include (1) official foreign exchange holdings by the government and (2) currency issuance by the government.

5. **Report 2SR.** Include data on all resident units in the financial corporations (FCs) sector (except the central bank) that issue liabilities included in the national definition of broad money. "Offshore banks" (that is, FCs that are designated as "offshore") that issue liabilities included in broad money should be included in the data in the report. The report should include the accounts of nonoperating other depository corporations (ODCs) that are being reorganized or are in the process of being liquidated, even if the nonoperating corporations' liabilities are excluded from broad money.

6. **Report 4SR.** Include data on all resident insurance corporations and pension funds, other financial intermediaries, and financial auxiliaries. (Ideally, the report should include data for all units in the FCs sector other than the depository corporations (DCs) covered in Reports 1SR and 2SR.)

7. The structure of the reports follows the structure of the sectoral balance sheets discussed in the *MFSM*.

8. Financial assets and liabilities in the sectoral balance sheets are presented by type of financial instrument (*MFSM*, Chapter IV):<sup>1</sup>

<sup>1</sup>Nonfinancial assets are a separately identified category of assets.

- Monetary gold and SDRs;
- Currency and deposits (encompassing transferable deposits and other deposits);<sup>2</sup>
- Securities other than shares;
- Loans;
- Shares and other equity;
- Insurance technical reserves;
- Financial derivatives; and
- Other accounts payable/receivable (encompassing *trade credit and advances* and *other accounts*).

9. Further, a position on each financial instrument is disaggregated into positions with main sectors and subsectors of the economy (*MFSM*, Chapter III):

- Nonresidents;
- Financial corporations;
  - Central bank;
  - ODCs;
  - Other financial corporations (OFCs);
  - Insurance corporations and pension funds;
  - Other financial intermediaries, except insurance corporations and pension funds;
  - Financial auxiliaries;
- Nonfinancial corporations;
  - Public nonfinancial corporations;
  - Other nonfinancial corporations;
- General government;
  - Central government;
  - State government;
  - Local government;
  - Social security funds;<sup>3</sup>
- Households; and
- Nonprofit institutions serving households (NPISH).

10. Where relevant, and in particular for *currency*, *deposits*, and *securities other than shares*, positions on a financial instrument are disaggregated into positions in national currency and positions in foreign currency. Further, positions on *deposits* (*transferable deposits* and *other deposits*) and *securities other than shares* are disaggregated by category included in the national definition of broad money and those excluded. Also, three components of *insurance technical reserves* are shown: *net equity of households in life insurance reserves*, *net equity of households*

<sup>2</sup>Note that the central bank's liability position on *currency* represents the central bank's issuance of currency and accordingly it is labeled as *currency in circulation*.

<sup>3</sup>Alternatively, social security funds can be allocated to the other subsectors of general government on the basis of the level at which they are organized.

*in pension funds, and prepayment of premiums and reserves against outstanding claims.*

11. In the reports, positions with households and NPISH are combined and shown as positions with *other resident sectors* rather than as separately identified positions with the constituent subsectors.

## Compilation Issues

### National currency unit

12. The standard unit of account for monetary and financial statistics is the national currency unit. Therefore, it is necessary to convert (that is, translate) all foreign-currency-denominated stocks and flows into national currency amounts. Stocks denominated in foreign currency should be converted to national currency values at the market exchange rate prevailing at the time to which the balance sheet applies. The midpoint between the buying and selling rates of exchange should be used.

### Valuation

13. The general principle is the use of market prices or approximations of market prices (that is, fair values) for valuing financial assets and liabilities in the reports. Market exchange rates should be used to convert (that is, translate) foreign-currency-denominated assets and liabilities into their domestic currency equivalents. Service charges, fees, commissions, taxes, and similar payments are income flows and, therefore, should be excluded from the valuation of financial instruments. Stocks of financial assets and liabilities should be valued on the basis of the market prices that prevailed at the time of the balance sheet reporting date. Other valuation rules apply to assets and liabilities in the form of deposits and loans (and most categories of other accounts receivable/payable) and to liabilities in the form of shares and other equity. See the specific information on the valuation of these instruments in the section on instruments, below.

14. All changes in the values of assets and liabilities that are not recorded in the profit and loss accounts should be recorded in the valuation adjustment account within shares and other equity on the liability side of the report. This valuation adjustment account also includes any valuation adjustments arising from differences between the valuations in the

national accounting standards and the monetary statistics methodology.

**15.** Accrued interest on deposits, loans, and securities other than shares should be incorporated into the outstanding amount of the financial asset or liability, rather than being treated as part of other accounts receivable/payable. Separate data on accrued interest disaggregated by financial instrument (loans or securities other than shares) and by national or foreign currency should be provided as memorandum items in the reports.

### Residency

**16.** Residency of customers should be based on the *economic center of interest* of the transactor, rather than nationality, currency of denomination, or legal definitions. All *institutional units* that have a location—dwelling, place of production, or other premises—within the economic territory of the reporting country from which they engage in a significant amount of economic activities in the reporting country should be considered residents. In most cases, it is reasonable to assume that institutional units have a center of economic interest in the country if they have already engaged in economic activities and transactions on a significant scale in the country for one year or more, or they intend to do so. *Individuals* have centers of economic interest in a reporting country when their principal residences are in the country. If they live and work abroad and expect to remain abroad for more than a year, individuals typically cease to be residents of the reporting country. However, some transactors in the reporting country, regardless of their centers of economic interest, are always considered to be nonresidents: particularly, embassies and consulates and their foreign-national employees, international organizations, tourists, foreign nationals expecting to stay in the reporting country for less than a year, and technical assistance personnel of foreign governments.

### Sectors

**17.** Sectorization of the institutional units in the economy is a key element in the compilation and presentation of monetary and financial statistics. As indicated by the lines in the reports, major categories of assets and liabilities must be disaggregated into relevant sectors and subsectors of the domestic economy.

**18.** In countries that are undergoing the restructuring of the FCs sector, separately identifying the positions with the FC that is responsible for the restructuring or liquidation is very important. Therefore, the reports should identify positions with this corporation under OFCs.

**19.** In general, social security funds are classified as central government or state and local government on the basis of the level at which they operate. However, social security fund deposits included in the national definition of money should be classified as deposit holdings of state and local government regardless of the level of government (central or state and local) at which the social security funds operate.

**20.** The general government sector (combining the subsectors central government, state and local governments, and social security funds) can be presented in countries where state and local governments are controlled by the central government and obtain the resources for financing their operations mainly through transfers from the central government.

### Instruments

#### Assets

**21. Monetary gold.** Gold held by the central bank as part of official reserves is monetary gold. Gold holdings that are not part of official reserves should be classified as nonfinancial assets. Monetary gold should be valued on the basis of the market price of gold. This category appears only in Report 1SR.

**22. Holdings of SDRs.** SDRs are international reserve assets created by the IMF and allocated to member countries to supplement existing official reserves. SDR holdings represent unconditional rights to obtain foreign exchange or other reserve assets from other IMF members. This category is relevant only for Report 1SR.

**23. National currency.** This comprises notes and coins that are of fixed nominal values, are accepted as legal tender in the domestic economy, and are issued by the central bank and/or government (and in a few countries by ODCs). This category should also include currency that is no longer legal tender but that can be exchanged for current legal tender. Gold or commemorative coins that are held for intrinsic or numismatic value and are not in active circulation should be classified as nonfinancial assets.

**24. Foreign currency.** This category comprises notes and coins that have been issued by nonresidents—usually, by central banks or foreign governments.

**25. Transferable deposits.** These are all deposits that are exchangeable on demand at par and without penalty or restriction and are directly usable for making payments by check, draft, giro order, direct debit/credit, or other direct payment facility. Transferable deposits include special savings accounts with a possibility of direct payments to third parties, savings account balances subject to automatic transfer to regular transferable deposits, and money market fund shares that have unrestricted third-party transferability privileges.

**26.** Transferable deposits that are held in banks in the process of liquidation should continue to be classified as transferable deposits, even though they cannot immediately be used for direct third-party payments.

**27.** Deposits denominated in national currency should be recorded at book value (outstanding amount plus accrued interest). Deposits denominated in foreign currency should be recorded in national currency as provided for in the section on valuation, above. These valuation principles apply to other deposits as well.

**28. Other deposits.** This category encompasses all claims, other than transferable deposits, that are represented by evidence of deposit. Other deposits include:

- Sight deposits (which permit immediate cash withdrawals but not direct third-party transfers);
- Savings and fixed-term deposits;
- FCs' liabilities in the form of shares or similar evidence of deposit that are, legally or in practice, redeemable immediately or at relatively short notice;
- Shares of money market funds that have restrictions on third-party transferability.

**29.** Other deposits with nonresidents include a separate line for multilateral payment agreements. This separate line appears only in Report 1SR.

**30.** In those countries where required reserves include other deposits, the separate lines for these deposits in national or foreign currency should be used. These separate lines appear only in Report 2SR.

**31.** Entries in the line Reserve Position in the IMF are applicable only in those countries that do not have entries in lines IMF Quota and IMF Account No. 1 & Securities. Reserve Position in the IMF is a net concept and is calculated as IMF Quota minus IMF Account No. 1 balances used in paying the IMF subscription. These lines appear only in Report 1SR.

**32. Securities other than shares.** These are negotiable instruments serving as evidence that units have obligations to settle by means of providing cash, a financial instrument, or some other item of economic value. Common types of securities other than shares are government treasury bills, government bonds, corporate bonds and debentures, commercial paper, and negotiable certificates of deposits. Loans that became negotiable should also be classified under this category. A separate line for holdings of securities other than shares that were issued by other resident sectors would be utilized only in those countries where FCs accept securities (for example, bills of exchange or other securities) issued by households or NPISH.

**33.** This category includes separate lines for reporting required reserves in the form of securities issued by the central bank. These lines appear only in Report 2SR.

**34. Loans.** Loans are defined as financial assets that are created when a creditor lends funds directly to a debtor and that are evidenced by nonnegotiable documents. This category includes all loans and advances extended to various sectors by FCs. This category includes commercial loans, mortgage loans, consumer loans, hire-purchase credit, loans to finance trade credit, financial leases, securities repurchase agreements, and possibly other types of loan arrangements. The valuation of loans is an exception to valuation based on market price or fair value. The valuation of loans denominated in national currency units should be based on the book value of creditors' outstanding claims (outstanding principal *plus* accrued interest) without adjustment for expected loan losses. (Data on expected loan losses are included in the memorandum items for the report, and data on provisions on loans and other impaired financial assets are shown in the other accounts payable—other.) The valuation of loans denominated in foreign currency should be based on the book value in foreign currency units multiplied by the market exchange rate.

**35. *Shares and other equity.*** This category comprises all instruments acknowledging, after the claims of all creditors have been met, claims on the residual value of a corporation. This category includes proprietors' net equity in quasi-corporations, as well as shares and other equity in corporations. It also includes preferred stock that provides for participation in the residual value upon dissolution of a corporation. Corporations sometimes purchase their own shares on the market. These reacquired shares (called treasury shares) are not included in holdings of shares and other equity. These shares are deducted from total funds contributed by owners (see liability instruments, below).

**36. *Insurance technical reserves.*** These consist of net equity of households in life insurance reserves and pension funds and prepayments of premiums and reserves against outstanding claims. On the asset side of FCs, this category records prepaid insurance premiums, which are relatively small amounts. See liability instruments for a description of insurance technical reserves.

**37. *Financial derivatives.*** These are financial instruments that are linked to a specific financial instrument, indicator, or commodity, and through which specific financial risks (such as interest rate, currency, equity, commodity price, or credit risk) can be traded in their own right in financial markets. The value of a financial derivative derives from the price of an underlying item such as an asset or index. The two broad types of financial derivatives are forward-type contracts and options contracts.

**38. *Other accounts receivable.*** These consist of trade credit and advances and other. Trade credit and advances comprise trade credit extended directly to corporations, government, nonprofit institutions, households, and the rest of the world and advances for work that is in progress (or is to be undertaken) and prepayment for goods and services.

**39.** When trade credit is provided by FCs, it is usually for financial services to corporations, either financial or nonfinancial. Unlike loans, trade credit is a non-interest-bearing instrument. Where applicable, trade credit and advances to the central government include prepaid value-added tax (VAT).

**40.** The "other" subcategory separately identifies settlement accounts, dividends receivable, items in

the process of collection, IMF quota subscription, and miscellaneous asset items.

**41.** Settlement accounts should be used for differences in the time of recording of purchases or sales of financial assets, on the *trade date* when change of ownership occurs, and the subsequent payments for the financial asset on the *settlement date*.

**42.** Dividends receivable on corporate shares arise from the recording of dividends when the dividends are declared, rather than later when the dividends are paid.

**43.** Items in the process of collection include checks or other types of transferable items that are posted directly to depositors' accounts, but these are unavailable for use until after the transferable items have been cleared through the central bank or other type of clearing organization.

**44.** The IMF quota subscription should be used for recording the quota that is determined upon admission to IMF membership and that is reassessed periodically under the IMF's General Quota Reviews. This line also includes subscriptions for membership in other international organizations. This line appears only in Report 1SR.

**45.** Miscellaneous asset items should include all accounts not elsewhere classified in the FCs' balance sheets. Major types of miscellaneous asset items often include suspense accounts, deferred tax assets, and prepayment of rent or other operating expenses.

**46. *Nonfinancial assets.*** These consist of tangible assets, both produced and nonproduced, and intangible assets for which no corresponding liabilities are recorded. Produced assets consist of fixed assets, inventories, and valuables (which are acquired and held primarily as stores of value). Fixed assets should include only those assets that are related to the activity of the reporting FC. Fixed assets should be shown in book value excluding accumulated depreciation of fixed assets, which are shown within other accounts payable—other.

**47.** Land should be classified within other nonfinancial assets. Land is not a produced asset and, therefore, it is not included in fixed assets, which arise from fixed capital formation. This category includes

gold holdings that are not part of official reserves, holdings of commemorative notes and coins, works of art, and assets other than financial instruments that have been acquired by an institution as part of a settlement for bad debts that were collateralized by these assets.

### *Liabilities*

**48. *Currency in circulation.*** This category comprises notes and coins that are of fixed nominal values, are accepted as legal tender in the domestic economy, and are issued by the central bank. This category should also include currency that is no longer legal tender but that can be exchanged for current legal tender. In calculating the amount of currency in circulation, central bank holdings of currency are deducted from the total amount of currency issued. This category appears only in Report 1SR.

**49. *Deposits included in broad money.*** These comprise transferable deposits and other deposits issued by resident DCs and included in the national definition of broad money. This category includes repurchase agreements that are included in the national definition of broad money. The same classification principle should be used for deposits transferred to smart cards (as well as direct remittances to smart cards) if smart cards and possibly other forms of electronic money have been included in the national definition of broad money. This category may include (depending on the national definition of broad money) deposits of nonresidents such as deposits that emigrant workers hold in DCs in their home countries. Some deposits for which withdrawals are restricted on the basis of legal, regulatory, or commercial requirements possibly are included in national definitions of broad money. See asset instruments for a description of transferable and other deposits.

**50.** The national definition of broad money may include domestic and/or foreign currency deposits at the central bank, which should be included in this category in Report 1SR.

**51. *Deposits excluded from broad money.*** These are transferable and other deposits that are not included in the national definition of broad money. This category includes all deposits of central government, DCs, and nonresidents (including IMF Accounts No. 1 and No. 2, which appear only in Form 1SR), as well as those categories of other sectors' depos-

its holdings that are not included in broad money. In Form 1SR, this category also includes IMF securities. These securities are immediately cashable, are not traded, and are substitutes for deposits in IMF Account No. 1. Therefore, IMF securities should be classified as deposits of nonresidents in national currency and reported together with IMF Account No. 1. Some or all types of deposits for which withdrawals are restricted on the basis of legal, regulatory, or commercial requirements may be excluded from national definitions of broad money.

**52.** In cases when a DC is unable to meet depositors' withdrawal demands, because it has insufficient funds or because its operations have been suspended, all customers' deposits in the DC should be classified in this category as long as the nonoperating DC continues to exist as a legal entity.

**53.** Other deposits excluded from broad money include separate lines for reporting required reserves (in national and possibly in foreign currencies) that are determined by a central bank. These separate lines appear only in Report 1SR.

**54.** Other deposits excluded from broad money include a separate line for nonresident deposits arising from multilateral payment agreements. This separate line appears only in Report 1SR.

**55. *Securities other than shares, included in broad money.*** These are negotiable financial instruments that are included in the national definition of broad money and are held by sectors designated as money holders. See asset instruments for a description of securities other than shares.

**56. *Securities other than shares, excluded from broad money.*** This category includes negotiable financial instruments that are not included in the national definition of broad money. The category covers securities other than shares that are held by central governments, DCs, and nonresidents, as well as those categories of other sectors' holdings of securities other than shares that are not included in broad money. This category includes subordinated debt.

**57.** This category also includes separate lines for reporting required reserves in the form of securities other than shares. These separate lines appear only in Report 1SR and relate only to those countries where

legal reserve requirements are fulfilled by holding securities issued by the central bank.

**58. *Loans.*** This category includes all loans and advances granted by various sectors. See asset instruments for a description of loans.

**59. *Insurance technical reserves.*** This category includes net equity of households in life insurance reserves and pension funds and prepayments of premiums and reserves against outstanding claims. These items are considered assets of beneficiaries and policyholders. Net equity of households in life insurance reserves and pension funds comprises policyholders' claims on the reserves of insurance corporations and pension funds. Prepayments of insurance premiums and reserves against outstanding claims are current claims of policyholders and beneficiaries rather than net equity of insurance corporations.

**60.** Sectoral classification of prepayments of insurance premiums and reserves against outstanding claims is essential for the central bank, ODCs, OFCs, and nonresidents. Data on prepayments of premiums and reserves against outstanding claims for central government, state and local governments, public and other nonfinancial corporations, and other resident sectors can be grouped together in one line.

**61. *Financial derivatives.*** See asset instruments for a description of financial derivatives.

**62. *Other accounts payable.*** This category includes trade credit and advances, and other. Trade credit and advances comprises trade credit received in purchasing goods and services directly from corporations, government, nonprofit institutions, households, and the rest of the world and advances received for work that is in progress (or is to be undertaken) and prepayments received for goods and services.

**63.** The “other” subcategory separately identifies settlement accounts, dividends payable, provision for losses on impaired financial assets, accumulated depreciation and impairment losses, and miscellaneous liability items.

**64.** The settlement accounts within other accounts payable should show an FC's obligations for payment (on future settlement dates) for assets that were purchased (on trade dates).

**65.** Dividends payable arise from the recording of dividends on the FC's shares at the time when the dividends are declared, rather than when paid.

**66.** Provisions for losses on impaired financial assets and accumulated depreciation and impairment losses on nonfinancial assets should be recorded within the *other accounts payable—other*, even though this treatment contrasts with national accounting standards and the International Accounting Standards in which these categories do not appear as liabilities on the balance sheet (but rather are deducted from outstanding amounts of the assets).

**67.** Miscellaneous liability items should include all accounts not elsewhere classified in the FCs' balance sheets. Major types of miscellaneous liability items often include suspense accounts, *provisions—liabilities* (unrelated to provisions for losses on impaired financial assets), deferred tax liabilities, accrued wages, rent or other operating expenses, accrued taxes, and issuance of commemorative notes and coins (this item appears only in Report ISR).

**68. *Shares and other equity.*** See asset instruments for a general description of shares and other equity. This category is divided into the following separate components:

- *Funds contributed by owners* includes the amount from the initial and any subsequent issuance of shares, stocks, or other form of ownership of corporations and quasi-corporations (excluding the amount of financial corporations' holdings of their own shares). This category also includes donations and special allocations other than SDR allocations. Funds contributed by owners should be recorded at nominal value.
- *Retained earnings* constitutes all after-tax profits that have not been distributed to shareholders or appropriated as general or special reserves. Retained earnings should be valued as the nominal amount of earnings retained.
- *Current year result* constitutes accumulated revenues less expenses for the current year if such profit or loss has not been included in retained earnings. Current year result should be valued as the nominal amount of revenue less expense.
- *General and special reserves* are appropriations of retained earnings. General and special reserves should be valued as the nominal amounts of such reserves.



- *SDR allocations* is the counterpart to the assets in the form of SDRs that have been provided by the IMF to the central bank. This component of shares and other equity appears only in Report 1SR. SDR allocations should be valued on the basis of the market exchange rate as of the balance sheet date (or may be valued at nominal amount, in accordance with national practice).
- *Valuation adjustment* represents the net counterpart to all changes in the values of assets and liabilities on the balance sheets of financial corporations except for valuation changes recorded in the profit or loss accounts. The valuation adjustment is market valued by definition. The valuation adjustment includes any valuation adjustments arising from differences between the valuations in the national accounting standards and the monetary statistics methodology.

#### Memorandum items

##### Central bank float

**69.** This represents the amount that the central bank has provided in advance to DCs that have sent checks or other items for collection. Central bank float appears only in Report 1SR.

##### Accrued interest

**70.** This item represents separate data on accrued interest, incorporated into the outstanding amount of the financial asset or liability, disaggregated by financial instrument (loans or securities other than shares) and by national or foreign currency.

##### Market value of liabilities in the form of shares and other equity

**71.** Data on a market value of shares and other equity disaggregated by a holding sector should be provided as a memorandum item in the Reports.

##### Claims on and liabilities to DCs and OFCs in liquidation

**72.** Separate data should be provided on claims on and liabilities to nonoperating DCs and OFCs that are being reorganized or are in the process of being liquidated, if the balance sheet data of the nonoperating FCs are not included in the coverage of Form 2SR and Form 4SR. This item, disaggregated by instrument and by national or foreign currency, is provided for consolidation purposes.

## Guidance Note for Completion of Report Form 5SR for Monetary Aggregates

### Methodology

**73.** Form 5SR is designed to accord with the methodology in the IMF's *MFSM*. The methodology emphasizes the application of cross-country consistency for financial asset/liability classification, economic sectorization, and accounting rules, resulting in a generally high degree of cross-country data comparability. For the monetary aggregates, however, the methodology must accommodate cross-country differences, recognizing that each country has the prerogative to construct its own definitions of the monetary aggregates.

### Broad Money and Components (Upper Section of Form 5SR)

**74.** The focus in the methodology of the *MFSM* is *Broad Money*, as officially defined by each country. Regardless of a country's definition of broad money, the reporting lines in the upper section of Form 5SR should be sufficient for reporting all components of broad money. In Form 5SR, *the data reporting is standardized*, but *the reported data are non-standardized* across countries. Some examples of nonstandardization of the components of monetary aggregates are:

- In some countries, *Broad Money* is defined to include only *Currency in Circulation Outside Depository Corporations* in line xxx59MA..R...{Z}, where xxx denotes the country code, and *Deposits in Depository Corporations (DCs)* in line xxx59MC..R...{Z} in Form 5SR. Even among these countries, the components of broad money may differ. For some countries, money-holding sectors' deposits in ODCs only are included in line xxx59MC..R...{Z}. In other countries, some types of central bank deposits are included in broad money and, therefore, are reported in line xxx59MC..R...{Z}, along with money-holding sectors' deposits in ODCs. In addition, some countries' definitions of *Broad Money* include deposits of all maturities, whereas other countries' definitions include only those deposits with maturities up to a specified maximum (up to two-year maturity, up to three-year maturity, etc.). Despite such differences in the definition of the deposit component of broad money, all components of *Broad Money* for

these countries are included in Form 5SR through the reporting of *Currency in Circulation Outside DCs* in **line xxx59MA..R...{Z}** and *Deposits in DCs* in **line xxx59MC..R...{Z}**. *Currency in Circulation Outside DCs* in **line xxx59MA..R...{Z}** of Form 5SR should equal *Currency in Circulation* in **line xxx14A.N.R...{Z}** of Form 1SR *minus* *Holdings of National Currency* in **line xxx20A.N.R...{Z}** of Form 2SR. For each reporting date, *Deposits in DCs* in **line xxx59MC..R...{Z}** of Form 5SR should equal the *sum* of (1) *Deposits Included in Broad Money* in **line xxx14....R...{Z}** of Form 1SR and (2) *Deposits Included in Broad Money* in **line xxx24....R...{Z}** of Form 2SR.

- In some countries, the central government issues currency (most often, in the form of coins), and the outstanding amount of such currency is included in the definition of broad money. Such currency should be reported in *Currency Issued by Central Government* in **line xxx59MB..R...{Z}** of Form 5SR. Being a liability of the central government rather than of the central bank, the currency does not appear in Form 1SR, and the data may need to be obtained directly from the central government.
- In some countries, *Broad Money* is defined to include some types of liabilities of nonfinancial corporations. The most prevalent types are deposits in public nonfinancial corporations (typically, savings deposits in the post office) and electronic deposits issued by other nonfinancial corporations (a relatively new type of deposit account in a few countries). In Form 5SR, these broad money components are reported in *Deposits in Nonfinancial Corporations*, **line xxx59MD..R...{Z}**. Because such deposits are not liabilities of DCs, the data do not appear in Form 1SR or Form 2SR and, therefore, must be obtained directly from the nonfinancial corporations that accept the deposits. An exception arises when the postal savings unit within a public nonfinancial corporation is treated as a separate institutional unit and is classified as an ODC. If classified as an ODC, the postal savings unit reports its deposit liabilities through the regular channels for ODCs reporting, resulting in the inclusion of the postal savings unit's deposits in *Deposits Included in Broad Money* in **line xxx24....R...{Z}** of Form 2SR, which are included in *Deposits in DCs* in **line xxx59MC..R...{Z}** of Form 5SR.
- For some countries, *Broad Money* is defined to include central-bank-issued and/or ODC-issued securities other than shares. This component of

broad money is reported in *Securities Other Than Shares Included in Broad Money* in **line xxx16.H..R...{Z}** of Form 1SR and/or **line xxx26.J..R...{Z}** of Form 2SR. The sum of these lines for each reporting period is entered in *Securities Issued by DCs* in **line xxx59ME..R...{Z}** of Form 5SR. To qualify as securities other than shares in the *MFSM* methodology, a financial instrument must be tradable in the secondary market. If nontradable, the financial instrument usually is classified as a loan. However, if included in broad money, the nontradable financial instrument should be classified as a deposit, resulting in inclusion of the outstanding amount in *Deposits Included in Broad Money* in **line xxx14....R...{Z}** of Form 1SR and/or **line xxx24....R...{Z}** of Form 2SR, leading to inclusion of the nontradable financial instruments in *Deposits in DCs* in **line xxx59MC..R...{Z}** of Form 5SR.

#### Monetary Aggregates (Lower Section of Form 5SR)

**75.** The data for *Monetary Aggregates* (M1, M2, etc.) are reported in the lower section of Form 5SR. The components of the lower-ordered monetary aggregates, like the components of broad money, are based on national definitions. Form 5SR shows only the monetary aggregates that are currently compiled. If a country's broadest monetary aggregate is M2, lines for M1 and M2 only are shown in Form 5SR; if the broadest monetary aggregate is M3, lines for M1, M2, and M3 are shown; etc.

**76.** The components of the monetary aggregates often differ across countries. M1 is almost universally defined as currency in circulation plus transferable deposits held by all money holding sectors. Nonetheless, M1 components may differ across countries. For example, one country may define the transferable deposit component of M1 to include traveler's checks issued by DCs, whereas another country may exclude the traveler's checks from transferable deposits and, therefore, from M1 (and possibly from all monetary aggregates). Cross-country differences in the definition of M1 are viewed as relatively minor, given that M1 attracts limited attention in modern monetary policy formulation and analysis.

**77.** The components of M2 and higher-ordered monetary aggregates depend on the specific types of financial instruments included at the national level.

Cross-country differences in national definitions of lowered-ordered aggregates also arise from differences in the maturity categories of nontransferable deposits included in a particular monetary aggregate. For example, the definition of M2 in one country may include time deposits of all maturities, whereas another country's M2 definition may include only those deposits with maturities that do not exceed a specified maximum term.

**78.** The *Broad Money* in **line xxx59M...R...{Z}** at the top of Form 5SR will contain the data for the highest-order monetary aggregate reported in the lower section of Form 5SR. Conceivably, a country might designate M2 as its official measure of broad money, but also might compile an unofficial M3 (and possibly higher-ordered monetary aggregates). In this case, *Broad Money* in **line xxx59M...R...{Z}** at the top of Form 5SR would agree with the data for

M2 in the lower section of Form 5SR. Each country is encouraged to define *Broad Money* as the broadest monetary aggregate for which reliable data are available.

**79.** If a country seasonally adjusts on its own, its data are reported in the lower section of Form 5SR, which includes a line for each seasonally adjusted monetary aggregate. The seasonally adjusted aggregate for broad money should also be reported in the upper section of Form 5SR in **line xxx59M.C.R...{Z}**. For countries that do not produce seasonally adjusted data, lines for seasonally adjusted data do not appear in Form 5SR. Seasonal adjustment may be undertaken by the IMF's Statistics Department, using unadjusted M1, M2, etc., as reported in Form 5SR, and adjustment procedures that are standardized across countries for which seasonally adjusted data do not appear on Form 5SR.

## REPORT FORM ISR FOR THE CENTRAL BANK

**ASSETS**

**XXX11....R...{Z}**  
 XXX11AU.R...{Z}  
 XXX11SD.R...{Z}

**XXX10....R...{Z}**  
 XXX11A.FR...{Z}  
 XXX11AAFR...{Z}  
 XXX11ABFR...{Z}  
 XXX10B.R...{Z}  
 XXX10BN.R...{Z}  
 XXX12EAN.R...{Z}  
 XXX12GAN.R...{Z}  
 XXX11B.N.R...{Z}  
 XXX10BFR...{Z}  
 XXX12EAFR...{Z}  
 XXX12GAFR...{Z}  
 XXX11B.FR...{Z}  
 XXX11BAFR...{Z}  
 XXX11BBFR...{Z}  
 XXX10C.R...{Z}  
 XXX10CN.R...{Z}  
 XXX12EBN.R...{Z}  
 XXX12GBN.R...{Z}  
 XXX11C.N.R...{Z}  
 XXX10CFR...{Z}  
 XXX12EBFR...{Z}  
 XXX12GBFR...{Z}  
 XXX11C.FR...{Z}  
 XXX11CAFR...{Z}  
 XXX11GT.R...{Z}  
 XXX11CCFR...{Z}  
 XXX11CDFR...{Z}  
 XXX11CBFR...{Z}

**XXX12.A...R...{Z}**  
 XXX12AN.R...{Z}  
 XXX12ECN.R...{Z}  
 XXX12GCN.R...{Z}  
 XXX12GLN.R...{Z}  
 XXX12GMN.R...{Z}  
 XXX12AAN.R...{Z}  
 XXX12BAN.R...{Z}  
 XXX12CAN.R...{Z}  
 XXX12DAN.R...{Z}  
 XXX12HAN.R...{Z}  
 XXX11D.N.R...{Z}  
 XXX12.AFR...{Z}  
 XXX12ECFR...{Z}  
 XXX12GCFR...{Z}  
 XXX12GLFR...{Z}  
 XXX12GMFR...{Z}  
 XXX12AAFR...{Z}  
 XXX12BAFR...{Z}  
 XXX12CAFR...{Z}  
 XXX12DAFR...{Z}  
 XXX12HAFR...{Z}

**MONETARY GOLD AND SDRs**

Monetary Gold  
 Holdings of SDRs

**CURRENCY AND DEPOSITS****HOLDINGS OF FOREIGN CURRENCY**

Foreign Currency Included in Official Reserve Assets  
 Foreign Currency Other

**TRANSFERABLE DEPOSITS****In National Currency**

Transf. Dep. Other Depository Corporations NC  
 Transf. Dep. Other Financial Corporations NC  
 Transf. Dep. Nonresidents NC

**In Foreign Currency**

Transf. Dep. Other Depository Corporations FC  
 Transf. Dep. Other Financial Corporations FC  
 Transf. Dep. Nonresidents FC  
 Transf. Dep. Included in Official Reserve Assets FC  
 Transf. Dep. Nonresidents Other FC

**OTHER DEPOSITS****In National Currency**

Other Dep. Other Depository Corporations NC  
 Other Dep. Other Financial Corporations NC  
 Other Dep. Nonresidents NC

**In Foreign Currency**

Other Dep. Other Depository Corporations FC  
 Other Dep. Other Financial Corporations FC  
 Other Dep. Nonresidents FC  
 Other Dep. Included in Official Reserve Assets FC  
 Reserve Position in the Fund FC  
 Other Dep. Multilateral Payment Agreements FC  
 Other Dep. Included in Official Reserve Assets Other FC  
 Other Dep. Nonresidents Other FC

**SECURITIES OTHER THAN SHARES****In National Currency**

Securities Other Depository Corporations NC  
 Securities Other Financial Corporations NC  
 Securities Banking Restructuring Agencies NC  
 Securities Other Financial Corporations Other NC  
 Securities Central Government NC  
 Securities State and Local Government NC  
 Securities Public Nonfinancial Corporations NC  
 Securities Other Nonfinancial Corporations NC  
 Securities Other Resident Sectors NC  
 Securities Nonresidents NC

**In Foreign Currency**

Securities Other Depository Corporations FC  
 Securities Other Financial Corporations FC  
 Securities Banking Restructuring Agencies FC  
 Securities Other Financial Corporations Other FC  
 Securities Central Government FC  
 Securities State and Local Government FC  
 Securities Public Nonfinancial Corporations FC  
 Securities Other Nonfinancial Corporations FC  
 Securities Other Resident Sectors FC

**REPORT FORM ISR FOR THE CENTRAL BANK (continued)**

XXXI1D.FR...{Z}  
 XXXI1DA.FR...{Z}  
 XXXI1DB.FR...{Z}

**XXXI2.B..R...{Z}**

XXXI2.BN.R...{Z}  
 XXXI2EDN.R...{Z}  
 XXXI2ERN.R...{Z}  
 XXXI2ESN.R...{Z}  
 XXXI2GDN.R...{Z}  
 XXXI2GRN.R...{Z}  
 XXXI2GSN.R...{Z}  
 XXXI2GTN.R...{Z}  
 XXXI2ABN.R...{Z}  
 XXXI2BBN.R...{Z}  
 XXXI2CBN.R...{Z}  
 XXXI2DBN.R...{Z}  
 XXXI2HBN.R...{Z}  
 XXXI1E.N.R...{Z}  
 XXXI1L.N.R...{Z}  
 XXXI1EAN.R...{Z}  
 XXXI1EBN.R...{Z}  
 XXXI2.BFR...{Z}  
 XXXI2EDFR...{Z}  
 XXXI2ERFR...{Z}  
 XXXI2ESFR...{Z}  
 XXXI2GDFR...{Z}  
 XXXI2GRFR...{Z}  
 XXXI2GSFR...{Z}  
 XXXI2GTFR...{Z}  
 XXXI2ABFR...{Z}  
 XXXI2BBFR...{Z}  
 XXXI2CBFR...{Z}  
 XXXI2DBFR...{Z}  
 XXXI2HBFR...{Z}  
 XXXI1E.F.R...{Z}  
 XXXI1L.F.R...{Z}  
 XXXI1EAFR...{Z}  
 XXXI1ECFR...{Z}  
 XXXI1EDFR...{Z}  
 XXXI1EBFR...{Z}  
 XXXI1EEFR...{Z}  
 XXXI1EFFR...{Z}

**XXXI2.C..R...{Z}**

XXXI2.CN.R...{Z}  
 XXXI2EEN.R...{Z}  
 XXXI2GEN.R...{Z}  
 XXXI2ACN.R...{Z}  
 XXXI2BCN.R...{Z}  
 XXXI2CCN.R...{Z}  
 XXXI2DCN.R...{Z}  
 XXXI1FN.R...{Z}  
 XXXI2.CFR...{Z}  
 XXXI2EEFR...{Z}  
 XXXI2GEFR...{Z}

**ASSETS (continued)**

Securities Nonresidents FC  
 Securities Included in Official Reserve Assets FC  
 Securities Nonresidents Other FC

**LOANS**

**In National Currency**

Loans Other Depository Corporations NC  
 Repurchase Agreements Other Depository Corporations NC  
 Other Loans to Other Depository Corporations NC  
 Loans Other Financial Corporations NC  
 Repurchase Agreements Other Financial Corporations NC  
 Loans Banking Restructuring Agencies NC  
 Other Loans to Other Financial Corporations NC  
 Loans Central Government NC  
 Loans State and Local Government NC  
 Loans Public Nonfinancial Corporations NC  
 Loans Other Nonfinancial Corporations NC  
 Loans Other Resident Sectors NC  
 Loans Nonresidents NC  
 Loans to IMF NC  
 Repurchase Agreements Nonresidents NC  
 Other Loans to Nonresidents NC

**In Foreign Currency**

Loans Other Depository Corporations FC  
 Repurchase Agreements Other Depository Corporations FC  
 Other Loans to Other Depository Corporations FC  
 Loans Other Financial Corporations FC  
 Repurchase Agreements Other Financial Corporations FC  
 Loans Banking Restructuring Agencies FC  
 Other Loans to Other Financial Corporations FC  
 Loans Central Government FC  
 Loans State and Local Government FC  
 Loans Public Nonfinancial Corporations FC  
 Loans Other Nonfinancial Corporations FC  
 Loans Other Resident Sectors FC  
 Loans Nonresidents FC  
 Loans to IMF FC  
 Repurchase Agreements Nonresidents FC  
 Repos Nonresidents Included in Official Reserve Assets FC  
 Repos Nonresidents Other FC  
 Other Loans to Nonresidents FC  
 Other Loans Nonresidents Included in Official Reserve Assets FC  
 Other Loans Nonresidents Other FC

**SHARES AND OTHER EQUITY**

**In National Currency**

Shares Other Depository Corporations NC  
 Shares Other Financial Corporations NC  
 Shares Central Government NC  
 Shares State and Local Government NC  
 Shares Public Nonfinancial Corporations NC  
 Shares Other Nonfinancial Corporations NC  
 Shares Nonresidents NC

**In Foreign Currency**

Shares Other Depository Corporations FC  
 Shares Other Financial Corporations FC

## REPORT FORM ISR FOR THE CENTRAL BANK (continued)

XXX12ACFR...{Z}	<b>ASSETS</b> (continued)
XXX12BCFR...{Z}	Shares Central Government FC
XXX12CCFR...{Z}	Shares State and Local Government FC
XXX12DCFR...{Z}	Shares Public Nonfinancial Corporations FC
XXX11FFR...{Z}	Shares Other Nonfinancial Corporations FC
XXX11FAFR...{Z}	Shares Nonresidents FC
XXX11FBFR...{Z}	Shares Included in Official Reserve Assets FC
	Shares Nonresidents Other FC
<b>XXX12.D.R...{Z}</b>	<b>INSURANCE TECHNICAL RESERVES</b>
XXX12.DN.R...{Z}	In National Currency
XXX12EFN.R...{Z}	Insurance Technical Reserves Other Depository Corporations NC
XXX12GFN.R...{Z}	Insurance Technical Reserves Other Financial Corporations NC
XXX11G.N.R...{Z}	Insurance Technical Reserves Nonresidents NC
XXX12.DFR...{Z}	In Foreign Currency
XXX12EFFR...{Z}	Insurance Technical Reserves Other Depository Corporations FC
XXX12GFFR...{Z}	Insurance Technical Reserves Other Financial Corporations FC
XXX11G.FR...{Z}	Insurance Technical Reserves Nonresidents FC
<b>XXX12.E.R...{Z}</b>	<b>FINANCIAL DERIVATIVES</b>
XXX12.EN.R...{Z}	In National Currency
XXX12EGN.R...{Z}	Financial Derivatives Other Depository Corporations NC
XXX12GGN.R...{Z}	Financial Derivatives Other Financial Corporations NC
XXX12ADN.R...{Z}	Financial Derivatives Central Government NC
XXX12BDN.R...{Z}	Financial Derivatives State and Local Government NC
XXX12CDN.R...{Z}	Financial Derivatives Public Nonfinancial Corporations NC
XXX12DDN.R...{Z}	Financial Derivatives Other Nonfinancial Corporations NC
XXX12HDN.R...{Z}	Financial Derivatives Other Resident Sectors NC
XXX11H.N.R...{Z}	Financial Derivatives Nonresidents NC
XXX12.EFR...{Z}	In Foreign Currency
XXX12EGFR...{Z}	Financial Derivatives Other Depository Corporations FC
XXX12GGFR...{Z}	Financial Derivatives Other Financial Corporations FC
XXX12ADFR...{Z}	Financial Derivatives Central Government FC
XXX12BDFR...{Z}	Financial Derivatives State and Local Government FC
XXX12CDFR...{Z}	Financial Derivatives Public Nonfinancial Corporations FC
XXX12DDFR...{Z}	Financial Derivatives Other Nonfinancial Corporations FC
XXX12HDFR...{Z}	Financial Derivatives Other Resident Sectors FC
XXX11H.FR...{Z}	Financial Derivatives Nonresidents FC
XXX11HAFR...{Z}	Financial Derivatives Included in Official Reserve Assets FC
XXX11HBFR...{Z}	Financial Derivatives Nonresidents Other FC
<b>XXX12.F.R...{Z}</b>	<b>OTHER ACCOUNTS RECEIVABLE</b>
XXX12.G.R...{Z}	<b>TRADE CREDIT AND ADVANCES</b>
XXX12.GN.R...{Z}	In National Currency
XXX12EHN.R...{Z}	Trade Credit/Advances Other Depository Corporations NC
XXX12GHN.R...{Z}	Trade Credit/Advances Other Financial Corporations NC
XXX12AEN.R...{Z}	Trade Credit/Advances Central Government NC
XXX12BEN.R...{Z}	Trade Credit/Advances State and Local Government NC
XXX12CEN.R...{Z}	Trade Credit/Advances Public Nonfinancial Corporations NC
XXX12DEN.R...{Z}	Trade Credit/Advances Other Nonfinancial Corporations NC
XXX12HEN.R...{Z}	Trade Credit/Advances Other Resident Sectors NC
XXX11I.N.R...{Z}	Trade Credit/Advances Nonresidents NC
XXX12.GFR...{Z}	In Foreign Currency
XXX12EHFR...{Z}	Trade Credit/Advances Other Depository Corporations FC
XXX12GHFR...{Z}	Trade Credit/Advances Other Financial Corporations FC
XXX12AEFR...{Z}	Trade Credit/Advances Central Government FC
XXX12BEFR...{Z}	Trade Credit/Advances State and Local Government FC

**REPORT FORM ISR FOR THE CENTRAL BANK (continued)**

XXX12CEFR...{Z}	<b>ASSETS (continued)</b>
XXX12DEFR...{Z}	Trade Credit/Advances Public Nonfinancial Corporations FC
XXX12HEFR...{Z}	Trade Credit/Advances Other Nonfinancial Corporations FC
XXX11I.FR...{Z}	Trade Credit/Advances Other Resident Sectors FC
XXX12.H.R...{Z}	Trade Credit/Advances Nonresidents FC
XXX13A...R...{Z}	<b>OTHER ACCOUNTS RECEIVABLE OTHER</b>
XXX13A.N.R...{Z}	Other Accounts Receivable Other Resident Sectors
XXX13AAN.R...{Z}	In National Currency
XXX13ABN.R...{Z}	Dividends Receivable Residents NC
XXX12EIN.R...{Z}	Settlement Accounts Residents NC
XXX12GIN.R...{Z}	Settlement Accounts Other Depository Corporations NC
XXX12AFN.R...{Z}	Settlement Accounts Other Financial Corporations NC
XXX12BFN.R...{Z}	Settlement Accounts Central Government NC
XXX12CFN.R...{Z}	Settlement Accounts State and Local Government NC
XXX12DFN.R...{Z}	Settlement Accounts Public Nonfinancial Corporations NC
XXX12HFN.R...{Z}	Settlement Accounts Other Nonfinancial Corporations NC
XXX13ACN.R...{Z}	Settlement Accounts Other Resident Sectors NC
XXX13ADN.R...{Z}	Items in the Process of Collection Residents NC
XXX13A.FR...{Z}	Miscellaneous Asset Items Residents NC
XXX13AAF.R...{Z}	In Foreign Currency
XXX13ABFR...{Z}	Dividends Receivable Residents FC
XXX12EIFR...{Z}	Settlement Accounts Residents FC
XXX12GIFR...{Z}	Settlement Accounts Other Depository Corporations FC
XXX12AFFR...{Z}	Settlement Accounts Other Financial Corporations FC
XXX12BFFR...{Z}	Settlement Accounts Central Government FC
XXX12CFFR...{Z}	Settlement Accounts State and Local Government FC
XXX12DFFR...{Z}	Settlement Accounts Public Nonfinancial Corporations FC
XXX12HFFR...{Z}	Settlement Accounts Other Nonfinancial Corporations FC
XXX13ACFR...{Z}	Settlement Accounts Other Resident Sectors FC
XXX13ADFR...{Z}	Items in the Process of Collection Residents FC
XXX12.HA.R...{Z}	Miscellaneous Asset Items Residents FC
XXX11Q...R...{Z}	Other Accounts Receivable Other Nonresidents
XXX11J...R...{Z}	IMF Quota
XXX11J.N.R...{Z}	Other Accounts Receivable Other Nonresidents
XXX11JAN.R...{Z}	Other Accounts Receivable Other Nonresidents NC
XXX11JBN.R...{Z}	Dividends Receivable Nonresidents NC
XXX11JCN.R...{Z}	Settlement Accounts Nonresidents NC
XXX11JDN.R...{Z}	Items in the Process of Collection Nonresidents NC
XXX11J.FR...{Z}	Miscellaneous Asset Items Nonresidents NC
XXX11JAFR...{Z}	Other Accounts Receivable Other Nonresidents FC
XXX11JBFR...{Z}	Dividends Receivable Nonresidents FC
XXX11JCFR...{Z}	Settlement Accounts Nonresidents FC
XXX11JDFR...{Z}	Items in the Process of Collection Nonresidents FC
	Miscellaneous Asset Items Nonresidents FC
<b>XXX13B...R...{Z}</b>	<b>NONFINANCIAL ASSETS</b>
XXX13BA...R...{Z}	Fixed Assets
XXX13BB...R...{Z}	Other Nonfinancial Assets
<b>XXX10RA...R...{Z}</b>	<b>TOTAL ASSETS</b>

## REPORT FORM ISR FOR THE CENTRAL BANK (continued)

**XXX14A.N.R...{Z}****XXX14....R...{Z}**

XXX14.M.R...{Z}

XXX14.A.R...{Z}

XXX14.AN.R...{Z}

XXX14JAN.R...{Z}

XXX14DAN.R...{Z}

XXX14EAN.R...{Z}

XXX14FAN.R...{Z}

XXX14GAN.R...{Z}

XXX14.AFR...{Z}

XXX14JAFR...{Z}

XXX14DAFR...{Z}

XXX14EAFR...{Z}

XXX14FAFR...{Z}

XXX14GAFR...{Z}

XXX15.A.R...{Z}

XXX15.AN.R...{Z}

XXX15JAN.R...{Z}

XXX15DAN.R...{Z}

XXX15EAN.R...{Z}

XXX15FAN.R...{Z}

XXX15GAN.R...{Z}

XXX15.AFR...{Z}

XXX15JAFR...{Z}

XXX15DAFR...{Z}

XXX15EAFR...{Z}

XXX15FAFR...{Z}

XXX15GAFR...{Z}

XXX15....R...{Z}

XXX14.B.R...{Z}

XXX14.BN.R...{Z}

XXX14JBN.R...{Z}

XXX14DBN.R...{Z}

XXX14EBN.R...{Z}

XXX14FBN.R...{Z}

XXX14GBN.R...{Z}

XXX14.BFR...{Z}

XXX14JBFR...{Z}

XXX14DBFR...{Z}

XXX14EBFR...{Z}

XXX14FBFR...{Z}

XXX14GBFR...{Z}

XXX15.B.R...{Z}

XXX15.BN.R...{Z}

XXX15JBN.R...{Z}

XXX15DBN.R...{Z}

XXX15EBN.R...{Z}

XXX15FBN.R...{Z}

XXX15GBN.R...{Z}

XXX15.BFR...{Z}

XXX15JBFR...{Z}

XXX15DBFR...{Z}

XXX15EBFR...{Z}

XXX15FBFR...{Z}

XXX15GBFR...{Z}

**LIABILITIES****CURRENCY IN CIRCULATION****DEPOSITS INCLUDED IN BROAD MONEY**

## DEPOSITS INCLUDED IN MONETARY BASE

## TRANSFERABLE DEPOSITS

In National Currency

Transf. Dep. Other Financial Corporations NC

Transf. Dep. State and Local Government NC

Transf. Dep. Public Nonfinancial Corporations NC

Transf. Dep. Other Nonfinancial Corporations NC

Transf. Dep. Other Resident Sectors NC

In Foreign Currency

Transf. Dep. Other Financial Corporations FC

Transf. Dep. State and Local Government FC

Transf. Dep. Public Nonfinancial Corporations FC

Transf. Dep. Other Nonfinancial Corporations FC

Transf. Dep. Other Resident Sectors FC

## OTHER DEPOSITS

In National Currency

Other Dep. Other Financial Corporations NC

Other Dep. State and Local Government NC

Other Dep. Public Nonfinancial Corporations NC

Other Dep. Other Nonfinancial Corporations NC

Other Dep. Other Resident Sectors NC

In Foreign Currency

Other Dep. Other Financial Corporations FC

Other Dep. State and Local Government FC

Other Dep. Public Nonfinancial Corporations FC

Other Dep. Other Nonfinancial Corporations FC

Other Dep. Other Resident Sectors FC

## DEPOSITS EXCLUDED FROM MONETARY BASE

## TRANSFERABLE DEPOSITS

In National Currency

Transf. Dep. Other Financial Corporations NC

Transf. Dep. State and Local Government NC

Transf. Dep. Public Nonfinancial Corporations NC

Transf. Dep. Other Nonfinancial Corporations NC

Transf. Dep. Other Resident Sectors NC

In Foreign Currency

Transf. Dep. Other Financial Corporations FC

Transf. Dep. State and Local Government FC

Transf. Dep. Public Nonfinancial Corporations FC

Transf. Dep. Other Nonfinancial Corporations FC

Transf. Dep. Other Resident Sectors FC

## OTHER DEPOSITS

In National Currency

Other Dep. Other Financial Corporations NC

Other Dep. State and Local Government NC

Other Dep. Public Nonfinancial Corporations NC

Other Dep. Other Nonfinancial Corporations NC

Other Dep. Other Resident Sectors NC

In Foreign Currency

Other Dep. Other Financial Corporations FC

Other Dep. State and Local Government FC

Other Dep. Public Nonfinancial Corporations FC

Other Dep. Other Nonfinancial Corporations FC

Other Dep. Other Resident Sectors FC



**REPORT FORM ISR FOR THE CENTRAL BANK (continued)**

**XXX16.A.R...{Z}**

XXX16.B.R...{Z}  
 XXX16.C.R...{Z}  
 XXX16.CN.R...{Z}  
 XXX14CAN.R...{Z}  
 XXX14CRN.R...{Z}  
 XXX14CSN.R...{Z}  
 XXX16.CFR...{Z}  
 XXX14CAFR...{Z}  
 XXX14CRFR...{Z}  
 XXX14CSFR...{Z}  
 XXX16.D.R...{Z}  
 XXX16.DN.R...{Z}  
 XXX14CBN.R...{Z}  
 XXX14CTN.R...{Z}  
 XXX14CUN.R...{Z}  
 XXX16.DFR...{Z}  
 XXX14CBFR...{Z}  
 XXX14CTFR...{Z}  
 XXX14CUFR...{Z}  
 XXX16.E.R...{Z}  
 XXX16.F.R...{Z}  
 XXX16.FN.R...{Z}  
 XXX14NAN.R...{Z}  
 XXX16JBN.R...{Z}  
 XXX16JLN.R...{Z}  
 XXX16JMN.R...{Z}  
 XXX16PAN.R...{Z}  
 XXX16FAN.R...{Z}  
 XXX16EAN.R...{Z}  
 XXX16DAN.R...{Z}  
 XXX16BAN.R...{Z}  
 XXX16BCN.R...{Z}  
 XXX16BEN.R...{Z}  
 XXX16BGN.R...{Z}  
 XXX16CAN.R...{Z}  
 XXX16UHN.R...{Z}  
 XXX16UIN.R...{Z}  
 XXX16UFN.R...{Z}  
 XXX16CLN.R...{Z}  
 XXX16.FFR...{Z}  
 XXX14NAFR...{Z}  
 XXX16JBF.R...{Z}  
 XXX16JLFR...{Z}  
 XXX16JMF.R...{Z}  
 XXX16PAFR...{Z}  
 XXX16FAFR...{Z}  
 XXX16DAFR...{Z}  
 XXX16BAFR...{Z}  
 XXX16BCFR...{Z}  
 XXX16BEFR...{Z}  
 XXX16BGFR...{Z}  
 XXX16CAFR...{Z}  
 XXX16CKFR...{Z}  
 XXX16CLFR...{Z}

**LIABILITIES (continued)**

**DEPOSITS EXCLUDED FROM BROAD MONEY**

DEPOSITS INCLUDED IN MONETARY BASE  
 TRANSFERABLE DEPOSITS  
 In National Currency  
     Transf. Dep. Excl. Other Depository Corporations NC  
     Required Reserves and Clearing Balances NC  
     Transf. Dep. Excl. Other Depository Corporations Other NC  
 In Foreign Currency  
     Transf. Dep. Excl. Other Depository Corporations FC  
     Required Reserves and Clearing Balances FC  
     Transf. Dep. Excl. Other Depository Corporations Other FC  
 OTHER DEPOSITS  
 In National Currency  
     Other Dep. Excl. Other Depository Corporations NC  
     Other Dep. Excl. Required Reserves NC  
     Other Dep. Excl. Other Depository Corporations Other NC  
 In Foreign Currency  
     Other Dep. Excl. Other Depository Corporations FC  
     Other Dep. Excl. Required Reserves FC  
     Other Dep. Excl. Other Depository Corporations Other FC  
 DEPOSITS EXCLUDED FROM MONETARY BASE  
 TRANSFERABLE DEPOSITS  
 In National Currency  
     Transf. Dep. Excl. Other Depository Corporations NC  
     Transf. Dep. Excl. Other Financial Corporations NC  
     Transf. Dep. Excl. Banking Restructuring Agencies NC  
     Transf. Dep. Excl. Other Financial Corporations Other NC  
     Transf. Dep. Excl. Central Government NC  
     Transf. Dep. Excl. Government Lending Funds NC  
     Transf. Dep. Excl. Counterpart Funds NC  
     Transf. Dep. Excl. Central Government Other NC  
     Transf. Dep. Excl. State and Local Government NC  
     Transf. Dep. Excl. Public Nonfinancial Corporations NC  
     Transf. Dep. Excl. Other Nonfinancial Corporations NC  
     Transf. Dep. Excl. Other Resident Sectors NC  
     Transf. Dep. Excl. Nonresidents NC  
     IMF Accounts No. 1 & Securities NC  
     IMF Account No. 2 NC  
     Use of Fund Credit NC  
     Transf. Dep. Excl. Nonresidents Other NC  
 In Foreign Currency  
     Transf. Dep. Excl. Other Depository Corporations FC  
     Transf. Dep. Excl. Other Financial Corporations FC  
     Transf. Dep. Excl. Banking Restructuring Agencies FC  
     Transf. Dep. Excl. Other Financial Corporations Other FC  
     Transf. Dep. Excl. Central Government FC  
     Transf. Dep. Excl. Government Lending Funds FC  
     Transf. Dep. Excl. Central Government Other FC  
     Transf. Dep. Excl. State and Local Government FC  
     Transf. Dep. Excl. Public Nonfinancial Corporations FC  
     Transf. Dep. Excl. Other Nonfinancial Corporations FC  
     Transf. Dep. Excl. Other Resident Sectors FC  
     Transf. Dep. Excl. Nonresidents FC  
     Transf. Dep. Excl. Nonresidents Short-Term FC  
     Transf. Dep. Excl. Nonresidents Long-Term FC

**REPORT FORM ISR FOR THE CENTRAL BANK (continued)**

XXX16.G.R...{Z}	<b>LIABILITIES (continued)</b>
XXX16.GN.R...{Z}	OTHER DEPOSITS
XXX14NBN.R...{Z}	In National Currency
XXX16JCN.R...{Z}	Other Dep. Excl. Other Depository Corporations NC
XXX16PBN.R...{Z}	Other Dep. Excl. Other Financial Corporations NC
XXX16FBN.R...{Z}	Other Dep. Excl. Central Government NC
XXX16EBN.R...{Z}	Other Dep. Excl. Government Lending Funds NC
XXX16DBN.R...{Z}	Other Dep. Excl. Counterpart Funds NC
XXX16BBN.R...{Z}	Other Dep. Excl. Central Government Other NC
XXX16BDN.R...{Z}	Other Dep. Excl. State and Local Government NC
XXX16BFN.R...{Z}	Other Dep. Excl. Public Nonfinancial Corporations NC
XXX16BHN.R...{Z}	Other Dep. Excl. Other Nonfinancial Corporations NC
XXX16CBN.R...{Z}	Other Dep. Excl. Other Resident Sectors NC
XXX16.GFR...{Z}	Other Dep. Excl. Nonresidents NC
XXX14NBF.R...{Z}	In Foreign Currency
XXX16JCF.R...{Z}	Other Dep. Excl. Other Depository Corporations FC
XXX16PBF.R...{Z}	Other Dep. Excl. Other Financial Corporations FC
XXX16FBF.R...{Z}	Other Dep. Excl. Central Government FC
XXX16DBF.R...{Z}	Other Dep. Excl. Government Lending Funds FC
XXX16BBF.R...{Z}	Other Dep. Excl. Central Government Other FC
XXX16BDF.R...{Z}	Other Dep. Excl. State and Local Government FC
XXX16BFF.R...{Z}	Other Dep. Excl. Public Nonfinancial Corporations FC
XXX16BHF.R...{Z}	Other Dep. Excl. Other Nonfinancial Corporations FC
XXX16CBF.R...{Z}	Other Dep. Excl. Other Resident Sectors FC
XXX16CMF.R...{Z}	Other Dep. Excl. Nonresidents FC
XXX16CNF.R...{Z}	Other Dep. Excl. Nonresidents Short-Term FC
XXX16COF.R...{Z}	Other Dep. Excl. Multilateral Payment Agreements FC
XXX16CPF.R...{Z}	Other Dep. Excl. Nonresidents Short-Term Other FC
	Other Dep. Excl. Nonresidents Long-Term FC

<b>XXX16.H.R...{Z}</b>	<b>SECURITIES OTHER THAN SHARES, INCLUDED IN BROAD MONEY</b>
XXX16.I.R...{Z}	SECURITIES OTHER THAN SHARES, INCLUDED IN MONETARY BASE
XXX16.IN.R...{Z}	In National Currency
XXX16JIN.R...{Z}	Securities Other Financial Corporations NC
XXX16AEN.R...{Z}	Securities State and Local Government NC
XXX16AFN.R...{Z}	Securities Public Nonfinancial Corporations NC
XXX16AGN.R...{Z}	Securities Other Nonfinancial Corporations NC
XXX16AHN.R...{Z}	Securities Other Resident Sectors NC
XXX16.IFR...{Z}	In Foreign Currency
XXX16JIF.R...{Z}	Securities Other Financial Corporations FC
XXX16AEF.R...{Z}	Securities State and Local Government FC
XXX16AFF.R...{Z}	Securities Public Nonfinancial Corporations FC
XXX16AGF.R...{Z}	Securities Other Nonfinancial Corporations FC
XXX16AHF.R...{Z}	Securities Other Resident Sectors FC
XXX16.J.R...{Z}	SECURITIES OTHER THAN SHARES, EXCLUDED FROM MONETARY BASE
XXX16.JN.R...{Z}	In National Currency
XXX16JAN.R...{Z}	Securities Other Financial Corporations NC
XXX16AAN.R...{Z}	Securities State and Local Government NC
XXX16ABN.R...{Z}	Securities Public Nonfinancial Corporations NC
XXX16ACN.R...{Z}	Securities Other Nonfinancial Corporations NC
XXX16ADN.R...{Z}	Securities Other Resident Sectors NC
XXX16.JFR...{Z}	In Foreign Currency
XXX16JAF.R...{Z}	Securities Other Financial Corporations FC
XXX16AAF.R...{Z}	Securities State and Local Government FC
XXX16ABF.R...{Z}	Securities Public Nonfinancial Corporations FC
XXX16ACF.R...{Z}	Securities Other Nonfinancial Corporations FC
XXX16ADF.R...{Z}	Securities Other Resident Sectors FC

**REPORT FORM ISR FOR THE CENTRAL BANK (continued)**

**XXX16.K.R...{Z}**

XXX16.L.R...{Z}  
 XXX16.LN.R...{Z}  
 XXX14CCN.R...{Z}  
 XXX14CVN.R...{Z}  
 XXX14CWN.R...{Z}  
 XXX16.LFR...{Z}  
 XXX14CCFR...{Z}  
 XXX14CVFR...{Z}  
 XXX14CWFR...{Z}  
 XXX16.M.R...{Z}  
 XXX16.MN.R...{Z}  
 XXX14NCN.R...{Z}  
 XXX16JDN.R...{Z}  
 XXX16DCN.R...{Z}  
 XXX16SAN.R...{Z}  
 XXX16SBN.R...{Z}  
 XXX16SCN.R...{Z}  
 XXX16SDN.R...{Z}  
 XXX16CCN.R...{Z}  
 XXX16.MFR...{Z}  
 XXX14NCFR...{Z}  
 XXX16JDFR...{Z}  
 XXX16DCFR...{Z}  
 XXX16SAFR...{Z}  
 XXX16SBFR...{Z}  
 XXX16SCFR...{Z}  
 XXX16SDFR...{Z}  
 XXX16CCFR...{Z}  
 XXX16CQFR...{Z}  
 XXX16CRFR...{Z}

**XXX16.N.R...{Z}**

XXX16.NN.R...{Z}  
 XXX14NDN.R...{Z}  
 XXX14CXN.R...{Z}  
 XXX14CYN.R...{Z}  
 XXX16JEN.R...{Z}  
 XXX16JRN.R...{Z}  
 XXX16JSN.R...{Z}  
 XXX16JTN.R...{Z}  
 XXX16DDN.R...{Z}  
 XXX16LAN.R...{Z}  
 XXX16LBN.R...{Z}  
 XXX16LCN.R...{Z}  
 XXX16LDN.R...{Z}  
 XXX16CDN.R...{Z}  
 XXX16UGN.R...{Z}  
 XXX16CSN.R...{Z}  
 XXX16CVN.R...{Z}  
 XXX16.NFR...{Z}  
 XXX14NDFR...{Z}  
 XXX14CXFR...{Z}  
 XXX14CYFR...{Z}  
 XXX16JEFR...{Z}  
 XXX16JRFER...{Z}

**LIABILITIES (continued)**

**SECURITIES OTHER THAN SHARES, EXCLUDED FROM BROAD MONEY**

**SECURITIES OTHER THAN SHARES, INCLUDED IN MONETARY BASE**

In National Currency  
 Securities Excl. Other Depository Corporations NC  
 Securities Excl. Required Reserves NC  
 Securities Excl. Other Depository Corporations Other NC  
 In Foreign Currency  
 Securities Excl. Other Depository Corporations FC  
 Securities Excl. Required Reserves FC  
 Securities Excl. Other Depository Corporations Other FC

**SECURITIES OTHER THAN SHARES, EXCLUDED FROM MONETARY BASE**

In National Currency  
 Securities Excl. Other Depository Corporations NC  
 Securities Excl. Other Financial Corporations NC  
 Securities Excl. Central Government NC  
 Securities Excl. State and Local Government NC  
 Securities Excl. Public Nonfinancial Corporations NC  
 Securities Excl. Other Nonfinancial Corporations NC  
 Securities Excl. Other Resident Sectors NC  
 Securities Excl. Nonresidents NC  
 In Foreign Currency  
 Securities Excl. Other Depository Corporations FC  
 Securities Excl. Other Financial Corporations FC  
 Securities Excl. Central Government FC  
 Securities Excl. State and Local Government FC  
 Securities Excl. Public Nonfinancial Corporations FC  
 Securities Excl. Other Nonfinancial Corporations FC  
 Securities Excl. Other Resident Sectors FC  
 Securities Excl. Nonresidents FC  
 Securities Excl. Nonresidents Short-Term FC  
 Securities Excl. Nonresidents Long-Term FC

**LOANS**

In National Currency  
 Loans Other Depository Corporations NC  
 Repurchase Agreements Other Depository Corporations NC  
 Other Loans from Other Depository Corporations NC  
 Loans Other Financial Corporations NC  
 Repurchase Agreements Other Financial Corporations NC  
 Loans Banking Restructuring Agencies NC  
 Other Loans from Other Financial Corporations NC  
 Loans Central Government NC  
 Loans State and Local Government NC  
 Loans Public Nonfinancial Corporations NC  
 Loans Other Nonfinancial Corporations NC  
 Loans Other Resident Sectors NC  
 Loans Nonresidents NC  
 Loans from IMF NC  
 Repurchase Agreements Nonresidents NC  
 Other Loans from Nonresidents NC  
 In Foreign Currency  
 Loans Other Depository Corporations FC  
 Repurchase Agreements Other Depository Corporations FC  
 Other Loans from Other Depository Corporations FC  
 Loans Other Financial Corporations FC  
 Repurchase Agreements Other Financial Corporations FC

**REPORT FORM ISR FOR THE CENTRAL BANK (continued)**

XXX16JSFR...{Z}	<b>LIABILITIES (continued)</b>
XXX16JTFR...{Z}	Loans Banking Restructuring Agencies FC
XXX16DDFR...{Z}	Other Loans from Other Financial Corporations FC
XXX16LAFR...{Z}	Loans Central Government FC
XXX16LBFR...{Z}	Loans State and Local Government FC
XXX16LCFR...{Z}	Loans Public Nonfinancial Corporations FC
XXX16LDFR...{Z}	Loans Other Nonfinancial Corporations FC
XXX16CDFR...{Z}	Loans Other Resident Sectors FC
XXX16UGFR...{Z}	Loans Nonresidents FC
XXX16CSFR...{Z}	Loans from IMF FC
XXX16CTFR...{Z}	Repurchase Agreements Nonresidents FC
XXX16CUFR...{Z}	Repos Nonresidents Short-Term FC
XXX16CVFR...{Z}	Repos Nonresidents Long-Term FC
XXX16CWF...{Z}	Other Loans from Nonresidents FC
XXX16CXFR...{Z}	Other Loans Nonresidents Short-Term FC
	Other Loans Nonresidents Long-Term FC
<b>XXX16.O.R...{Z}</b>	<b>FINANCIAL DERIVATIVES</b>
XXX16.ON.R...{Z}	In National Currency
XXX14NEN.R...{Z}	Financial Derivatives Other Depository Corporations NC
XXX16JFN.R...{Z}	Financial Derivatives Other Financial Corporations NC
XXX16DEN.R...{Z}	Financial Derivatives Central Government NC
XXX16MAN.R...{Z}	Financial Derivatives State and Local Government NC
XXX16MBN.R...{Z}	Financial Derivatives Public Nonfinancial Corporations NC
XXX16MCN.R...{Z}	Financial Derivatives Other Nonfinancial Corporations NC
XXX16MDN.R...{Z}	Financial Derivatives Other Resident Sectors NC
XXX16CEN.R...{Z}	Financial Derivatives Nonresidents NC
XXX16.OFR...{Z}	In Foreign Currency
XXX14NEFR...{Z}	Financial Derivatives Other Depository Corporations FC
XXX16JFFR...{Z}	Financial Derivatives Other Financial Corporations FC
XXX16DEFR...{Z}	Financial Derivatives Central Government FC
XXX16MAFR...{Z}	Financial Derivatives State and Local Government FC
XXX16MBFR...{Z}	Financial Derivatives Public Nonfinancial Corporations FC
XXX16MCFR...{Z}	Financial Derivatives Other Nonfinancial Corporations FC
XXX16MDFR...{Z}	Financial Derivatives Other Resident Sectors FC
XXX16CEFR...{Z}	Financial Derivatives Nonresidents FC
XXX16CYFR...{Z}	Financial Derivatives Nonresidents Short-Term FC
XXX16CZFR...{Z}	Financial Derivatives Nonresidents Long-Term FC
<b>XXX17....R...{Z}</b>	<b>OTHER ACCOUNTS PAYABLE</b>
XXX16.P.R...{Z}	<b>TRADE CREDIT AND ADVANCES</b>
XXX16.PN.R...{Z}	In National Currency
XXX14NFN.R...{Z}	Trade Credit/Advances Other Depository Corporations NC
XXX16JGN.R...{Z}	Trade Credit/Advances Other Financial Corporations NC
XXX16DFN.R...{Z}	Trade Credit/Advances Central Government NC
XXX16NAN.R...{Z}	Trade Credit/Advances State and Local Government NC
XXX16NBN.R...{Z}	Trade Credit/Advances Public Nonfinancial Corporations NC
XXX16NCN.R...{Z}	Trade Credit/Advances Other Nonfinancial Corporations NC
XXX16NDN.R...{Z}	Trade Credit/Advances Other Resident Sectors NC
XXX16CFN.R...{Z}	Trade Credit/Advances Nonresidents NC
XXX16.PFR...{Z}	In Foreign Currency
XXX14NFFR...{Z}	Trade Credit/Advances Other Depository Corporations FC
XXX16JGFR...{Z}	Trade Credit/Advances Other Financial Corporations FC
XXX16DFFR...{Z}	Trade Credit/Advances Central Government FC
XXX16NAFR...{Z}	Trade Credit/Advances State and Local Government FC
XXX16NBFR...{Z}	Trade Credit/Advances Public Nonfinancial Corporations FC
XXX16NCFR...{Z}	Trade Credit/Advances Other Nonfinancial Corporations FC
XXX16NDFR...{Z}	Trade Credit/Advances Other Resident Sectors FC
XXX16CFFR...{Z}	Trade Credit/Advances Nonresidents FC

REPORT FORM ISR FOR THE CENTRAL BANK (continued)

LIABILITIES (continued)

**XXX16.Q.R...{Z}**

XXX17P...R...{Z}  
 XXX17PA..R...{Z}  
 XXX17PB..R...{Z}  
 XXX17D...R...{Z}  
 XXX17I...R...{Z}  
 XXX17B...R...{Z}  
 XXX17B.N.R...{Z}  
 XXX17BAN.R...{Z}  
 XXX17BBN.R...{Z}  
 XXX14NGN.R...{Z}  
 XXX16JHN.R...{Z}  
 XXX16DGN.R...{Z}  
 XXX16OAN.R...{Z}  
 XXX16OBN.R...{Z}  
 XXX16OCN.R...{Z}  
 XXX16ODN.R...{Z}  
 XXX17BCN.R...{Z}  
 XXX17B.FR...{Z}  
 XXX17BAFR...{Z}  
 XXX17BBFR...{Z}  
 XXX14NGFR...{Z}  
 XXX16JHFR...{Z}  
 XXX16DGFR...{Z}  
 XXX16OAFR...{Z}  
 XXX16OBFR...{Z}  
 XXX16OCFR...{Z}  
 XXX16ODFR...{Z}  
 XXX17BCFR...{Z}  
 XXX16CG..R...{Z}  
 XXX16CGN.R...{Z}  
 XXX16CHN.R...{Z}  
 XXX16CIN.R...{Z}  
 XXX16CJN.R...{Z}  
 XXX16CGFR...{Z}  
 XXX16CHFR...{Z}  
 XXX16CIFR...{Z}  
 XXX16CJFR...{Z}

**XXX17A...R...{Z}**

XXX17AA..R...{Z}  
 XXX17AAN.R...{Z}  
 XXX17AAF.R...{Z}  
 XXX17AB..R...{Z}  
 XXX17AC..R...{Z}  
 XXX17AD..R...{Z}  
 XXX17.SD.R...{Z}  
 XXX17RV..R...{Z}

**XXX10RL...R...{Z}**

XXX10R.V.R...{Z}

**OTHER ACCOUNTS PAYABLE OTHER**

Provisions for Losses  
 Provisions for Loan Losses  
 Provisions for Other Losses  
 Accumulated Depreciation  
 Consolidation Adjustment for Headquarter and Branches  
 Other Accounts Payable Other Resident Sectors  
 In National Currency  
 Dividends Payable Residents NC  
 Settlement Accounts Residents NC  
 Settlement Accounts Other Depository Corporations NC  
 Settlement Accounts Other Financial Corporations NC  
 Settlement Accounts Central Government NC  
 Settlement Accounts State and Local Government NC  
 Settlement Accounts Public Nonfinancial Corporations NC  
 Settlement Accounts Other Nonfinancial Corporations NC  
 Settlement Accounts Other Resident Sectors NC  
 Miscellaneous Liability Items Residents NC  
 In Foreign Currency  
 Dividends Payable Residents FC  
 Settlement Accounts Residents FC  
 Settlement Accounts Other Depository Corporations FC  
 Settlement Accounts Other Financial Corporations FC  
 Settlement Accounts Central Government FC  
 Settlement Accounts State and Local Government FC  
 Settlement Accounts Public Nonfinancial Corporations FC  
 Settlement Accounts Other Nonfinancial Corporations FC  
 Settlement Accounts Other Resident Sectors FC  
 Miscellaneous Liability Items Residents FC  
 Other Accounts Payable Other Nonresidents  
 Other Accounts Payable Other Nonresidents NC  
 Dividends Payable Nonresidents NC  
 Settlement Accounts Nonresidents NC  
 Miscellaneous Liability Items Nonresidents NC  
 Other Accounts Payable Other Nonresidents FC  
 Dividends Payable Nonresidents FC  
 Settlement Accounts Nonresidents FC  
 Miscellaneous Liability Items Nonresidents FC

**SHARES AND OTHER EQUITY**

Funds Contributed by Owners  
 Funds Contributed by Owners NC  
 Funds Contributed by Owners FC  
 Retained Earnings  
 Current Year Result  
 General and Special Reserves  
 SDR Allocations  
 Valuation Adjustment

**TOTAL LIABILITIES**

Vertical Check

**REPORT FORM ISR FOR THE CENTRAL BANK (continued)**

XXX10EX..R...{Z}	<b>MEMORANDUM ITEMS</b> End of Period Exchange Rate
	<b>ASSETS</b>
XXX13FL..R...{Z}	CENTRAL BANK FLOAT
XXX13KA..R...{Z}	ACCRUED INTEREST ON LOANS
XXX13KB..R...{Z}	ARREARS ON LOANS (PRINCIPAL AND INTEREST)
XXX13KC..R...{Z}	EXPECTED LOSSES ON LOANS
XXX13KCA.R...{Z}	Other Depository Corporations
XXX13KCB.R...{Z}	Other Financial Corporations
XXX13KCC.R...{Z}	Central Government
XXX13KCD.R...{Z}	State and Local Government
XXX13KCE.R...{Z}	Public Nonfinancial Corporations
XXX13KCF.R...{Z}	Other Nonfinancial Corporations
XXX13KCG.R...{Z}	Other Resident Sectors
XXX13KCH.R...{Z}	Nonresidents
XXX13KD..R...{Z}	ACCRUED INTEREST ON SECURITIES OTHER THAN SHARES
XXX13L...R...{Z}	CLAIMS ON OTHER DEPOSITORY CORPORATIONS IN LIQUIDATION
XXX13LA..R...{Z}	TRANSFERABLE DEPOSITS
XXX13LAN.R...{Z}	Transf. Dep. Other Depository Corporations in Liquidation NC
XXX13LAF.R...{Z}	Transf. Dep. Other Depository Corporations in Liquidation FC
XXX13LB..R...{Z}	OTHER DEPOSITS
XXX13LBN.R...{Z}	Other Dep. Other Depository Corporations in Liquidation NC
XXX13LBF.R...{Z}	Other Dep. Other Depository Corporations in Liquidation FC
XXX13LC..R...{Z}	SECURITIES OTHER THAN SHARES
XXX13LCN.R...{Z}	Securities Other Depository Corporations in Liquidation NC
XXX13LCF.R...{Z}	Securities Other Depository Corporations in Liquidation FC
XXX13LD..R...{Z}	LOANS
XXX13LDN.R...{Z}	Loans Other Depository Corporations in Liquidation NC
XXX13LDF.R...{Z}	Loans Other Depository Corporations in Liquidation FC
XXX13LE..R...{Z}	SHARES AND OTHER EQUITY
XXX13LF..R...{Z}	FINANCIAL DERIVATIVES
XXX13LFN.R...{Z}	Financial Derivatives Other Depository Corporations in Liquidation NC
XXX13LFF.R...{Z}	Financial Derivatives Other Depository Corporations in Liquidation FC
XXX13LG..R...{Z}	OTHER ACCOUNTS RECEIVABLE
XXX13LGN.R...{Z}	Other Accounts Rec. Other Depository Corporations in Liquidation NC
XXX13LGF.R...{Z}	Other Accounts Rec. Other Depository Corporations in Liquidation FC
XXX13M...R...{Z}	CLAIMS ON OTHER FINANCIAL CORPORATIONS IN LIQUIDATION
XXX13MA..R...{Z}	TRANSFERABLE DEPOSITS
XXX13MAN.R...{Z}	Transf. Dep. Other Financial Corporations in Liquidation NC
XXX13MAF.R...{Z}	Transf. Dep. Other Financial Corporations in Liquidation FC
XXX13MB..R...{Z}	OTHER DEPOSITS
XXX13MBN.R...{Z}	Other Dep. Other Financial Corporations in Liquidation NC
XXX13MBF.R...{Z}	Other Dep. Other Financial Corporations in Liquidation FC
XXX13MC..R...{Z}	SECURITIES OTHER THAN SHARES
XXX13MCN.R...{Z}	Securities Other Financial Corporations in Liquidation NC
XXX13MCF.R...{Z}	Securities Other Financial Corporations in Liquidation FC
XXX13MD..R...{Z}	LOANS
XXX13MDN.R...{Z}	Loans Other Financial Corporations in Liquidation NC
XXX13MDF.R...{Z}	Loans Other Financial Corporations in Liquidation FC
XXX13ME..R...{Z}	SHARES AND OTHER EQUITY
XXX13MF..R...{Z}	FINANCIAL DERIVATIVES
XXX13MFN.R...{Z}	Financial Derivatives Other Financial Corporations in Liquidation NC

**REPORT FORM ISR FOR THE CENTRAL BANK (continued)**

XXX13MFFR...{Z}	<b>MEMORANDUM ITEMS (continued)</b>
XXX13MG..R...{Z}	Financial Derivatives Other Financial Corporations in Liquidation FC
XXX13MGN.R...{Z}	<b>OTHER ACCOUNTS RECEIVABLE</b>
XXX13MGFR...{Z}	Other Accounts Rec. Other Financial Corporations in Liquidation NC
	Other Accounts Rec. Other Financial Corporations in Liquidation FC
	<b>LIABILITIES</b>
XXX17KA..R...{Z}	<b>ACCRUED INTEREST ON LOANS</b>
XXX17KB..R...{Z}	<b>ARREARS ON LOANS (PRINCIPAL AND INTEREST)</b>
XXX17KBAR...{Z}	of which: Loans from IMF
XXX17KC..R...{Z}	<b>ACCRUED INTEREST ON SECURITIES OTHER THAN SHARES</b>
XXX17AM..R...{Z}	<b>SHARES AND OTHER EQUITY: MARKET VALUE, BY HOLDING SECTOR</b>
XXX17AMA.R...{Z}	Other Depository Corporations
XXX17AMB.R...{Z}	Other Financial Corporations
XXX17AMC.R...{Z}	Central Government
XXX17AMD.R...{Z}	State and Local Government
XXX17AME.R...{Z}	Public Nonfinancial Corporations
XXX17AMFR...{Z}	Other Nonfinancial Corporations
XXX17AMG.R...{Z}	Other Resident Sectors
XXX17AMH.R...{Z}	Nonresidents
XXX17L...R...{Z}	<b>LIABILITIES TO OTHER DEPOSITORY CORPORATIONS IN LIQUIDATION</b>
XXX17LA..R...{Z}	<b>TRANSFERABLE DEPOSITS EXCLUDED FROM BROAD MONEY</b>
XXX17LAN.R...{Z}	Transf. Dep. Excl. Other Depository Corporations in Liquidation NC
XXX17LAFR...{Z}	Transf. Dep. Excl. Other Depository Corporations in Liquidation FC
XXX17LB..R...{Z}	<b>OTHER DEPOSITS EXCLUDED FROM BROAD MONEY</b>
XXX17LBN.R...{Z}	Other Dep. Excl. Other Depository Corporations in Liquidation NC
XXX17LBF.R...{Z}	Other Dep. Excl. Other Depository Corporations in Liquidation FC
XXX17LC..R...{Z}	<b>SECURITIES OTHER THAN SHARES, EXCLUDED FROM BROAD MONEY</b>
XXX17LCN.R...{Z}	Securities Excl. Other Depository Corporations in Liquidation NC
XXX17LCFR...{Z}	Securities Excl. Other Depository Corporations in Liquidation FC
XXX17LD..R...{Z}	<b>LOANS</b>
XXX17LDN.R...{Z}	Loans Other Depository Corporations in Liquidation NC
XXX17LDFR...{Z}	Loans Other Depository Corporations in Liquidation FC
XXX17LE..R...{Z}	<b>FINANCIAL DERIVATIVES</b>
XXX17LEN.R...{Z}	Financial Derivatives Other Depository Corporations in Liquidation NC
XXX17LEFR...{Z}	Financial Derivatives Other Depository Corporations in Liquidation FC
XXX17LF..R...{Z}	<b>OTHER ACCOUNTS PAYABLE</b>
XXX17LFN.R...{Z}	Other Accounts Pay. Other Depository Corporations in Liquidation NC
XXX17LFFR...{Z}	Other Accounts Pay. Other Depository Corporations in Liquidation FC
XXX17M...R...{Z}	<b>LIABILITIES TO OTHER FINANCIAL CORPORATIONS IN LIQUIDATION</b>
XXX17MA..R...{Z}	<b>TRANSFERABLE DEPOSITS EXCLUDED FROM BROAD MONEY</b>
XXX17MAN.R...{Z}	Transf. Dep. Excl. Other Financial Corporations in Liquidation NC
XXX17MAFR...{Z}	Transf. Dep. Excl. Other Financial Corporations in Liquidation FC
XXX17MB..R...{Z}	<b>OTHER DEPOSITS EXCLUDED FROM BROAD MONEY</b>
XXX17MBN.R...{Z}	Other Dep. Excl. Other Financial Corporations in Liquidation NC
XXX17MBFR...{Z}	Other Dep. Excl. Other Financial Corporations in Liquidation FC
XXX17MC..R...{Z}	<b>SECURITIES OTHER THAN SHARES, EXCLUDED FROM BROAD MONEY</b>
XXX17MCN.R...{Z}	Securities Excl. Other Financial Corporations in Liquidation NC
XXX17MCFR...{Z}	Securities Excl. Other Financial Corporations in Liquidation FC
XXX17MD..R...{Z}	<b>LOANS</b>
XXX17MDN.R...{Z}	Loans Other Financial Corporations in Liquidation NC
XXX17MDFR...{Z}	Loans Other Financial Corporations in Liquidation FC

**REPORT FORM ISR FOR THE CENTRAL BANK (concluded)**

XXX17ME..R...{Z}  
 XXX17MEN.R...{Z}  
 XXX17MEFR...{Z}  
 XXX17MF..R...{Z}  
 XXX17MFN.R...{Z}  
 XXX17MFFR...{Z}

**MEMORANDUM ITEMS** *(continued)***FINANCIAL DERIVATIVES**

Financial Derivatives Other Financial Corporations in Liquidation NC

Financial Derivatives Other Financial Corporations in Liquidation FC

**OTHER ACCOUNTS PAYABLE**

Other Accounts Pay. Other Financial Corporations in Liquidation NC

Other Accounts Pay. Other Financial Corporations in Liquidation FC

**FUND ACCOUNTS**

*(millions of US dollars)*

XXX11GT..D...{Z}  
 XXX11SD..D...{Z}  
 XXX16UF..D...{Z}  
 XXX17SD..D...{Z}

Reserve Position in the Fund, IMF Record

SDR Holdings, IMF Record

Use of Fund Credit & Loans, IMF Record

SDR Allocations, IMF Record

*(millions of NC)*

XXX11GT..R...{Z}  
 XXX11SD..R...{Z}  
 XXX16UF..R...{Z}  
 XXX17SD..R...{Z}

Reserve Position in the Fund, IMF Record

SDR Holdings, IMF Record

Use of Fund Credit & Loans, IMF Record

SDR Allocations, IMF Record



**REPORT FORM 2SR FOR OTHER DEPOSITORY CORPORATIONS**

**ASSETS**

**XXX20....R...{Z}**

XXX20.A.R...{Z}  
 XXX20A.N.R...{Z}  
 XXX21A.FR...{Z}  
 XXX20.B.R...{Z}  
 XXX20.BN.R...{Z}  
 XXX20B.N.R...{Z}  
 XXX20BAN.R...{Z}  
 XXX20BDN.R...{Z}  
 XXX22EAN.R...{Z}  
 XXX22GAN.R...{Z}  
 XXX21B.N.R...{Z}  
 XXX20.BFR...{Z}  
 XXX20B.FR...{Z}  
 XXX20BAFR...{Z}  
 XXX20BDFR...{Z}  
 XXX22EAFR...{Z}  
 XXX22GAFR...{Z}  
 XXX21B.FR...{Z}  
 XXX20.C.R...{Z}  
 XXX20.CN.R...{Z}  
 XXX20C.N.R...{Z}  
 XXX20BBN.R...{Z}  
 XXX20BEN.R...{Z}  
 XXX22EBN.R...{Z}  
 XXX22GBN.R...{Z}  
 XXX21C.N.R...{Z}  
 XXX20.CFR...{Z}  
 XXX20C.FR...{Z}  
 XXX20BBFR...{Z}  
 XXX20BEFR...{Z}  
 XXX22EBFR...{Z}  
 XXX22GBFR...{Z}  
 XXX21C.FR...{Z}

**XXX22.A.R...{Z}**

XXX22.AN.R...{Z}  
 XXX20D.N.R...{Z}  
 XXX20BCN.R...{Z}  
 XXX20DAN.R...{Z}  
 XXX22ECN.R...{Z}  
 XXX22GCN.R...{Z}  
 XXX22GLN.R...{Z}  
 XXX22GMN.R...{Z}  
 XXX22AAN.R...{Z}  
 XXX22BAN.R...{Z}  
 XXX22CAN.R...{Z}  
 XXX22DAN.R...{Z}  
 XXX22HAN.R...{Z}  
 XXX21D.N.R...{Z}  
 XXX22.AFR...{Z}  
 XXX20D.FR...{Z}  
 XXX20BCFR...{Z}  
 XXX20DAFR...{Z}

**CURRENCY AND DEPOSITS**

**CURRENCY**

Holdings of National Currency  
 Holdings of Foreign Currency

**TRANSFERABLE DEPOSITS**

**In National Currency**

Transf. Dep. Central Bank NC  
 Required Reserves and Clearing Balances NC  
 Transf. Dep. Central Bank Other NC  
 Transf. Dep. Other Depository Corporations NC  
 Transf. Dep. Other Financial Corporations NC  
 Transf. Dep. Nonresidents NC

**In Foreign Currency**

Transf. Dep. Central Bank FC  
 Required Reserves and Clearing Balances FC  
 Transf. Dep. Central Bank Other FC  
 Transf. Dep. Other Depository Corporations FC  
 Transf. Dep. Other Financial Corporations FC  
 Transf. Dep. Nonresidents FC

**OTHER DEPOSITS**

**In National Currency**

Other Dep. Central Bank NC  
 Other Dep. Required Reserves NC  
 Other Dep. Central Bank Other NC  
 Other Dep. Other Depository Corporations NC  
 Other Dep. Other Financial Corporations NC  
 Other Dep. Nonresidents NC

**In Foreign Currency**

Other Dep. Central Bank FC  
 Other Dep. Required Reserves FC  
 Other Dep. Central Bank Other FC  
 Other Dep. Other Depository Corporations FC  
 Other Dep. Other Financial Corporations FC  
 Other Dep. Nonresidents FC

**SECURITIES OTHER THAN SHARES**

**In National Currency**

Securities Central Bank NC  
 Securities Required Reserves NC  
 Securities Central Bank Other NC  
 Securities Other Depository Corporations NC  
 Securities Other Financial Corporations NC  
 Securities Banking Restructuring Agencies NC  
 Securities Other Financial Corporations Other NC  
 Securities Central Government NC  
 Securities State and Local Government NC  
 Securities Public Nonfinancial Corporations NC  
 Securities Other Nonfinancial Corporations NC  
 Securities Other Resident Sectors NC  
 Securities Nonresidents NC

**In Foreign Currency**

Securities Central Bank FC  
 Securities Required Reserves FC  
 Securities Central Bank Other FC

**REPORT FORM 2SR FOR OTHER DEPOSITORY CORPORATIONS (continued)**

XXX22ECFR...{Z}  
 XXX22GCFR...{Z}  
 XXX22GLFR...{Z}  
 XXX22GMFR...{Z}  
 XXX22AAF.R...{Z}  
 XXX22BAFR...{Z}  
 XXX22CAFR...{Z}  
 XXX22DAFR...{Z}  
 XXX22HAFR...{Z}  
 XXX21D.FR...{Z}

**XXX22.B..R...{Z}**

XXX22.BN.R...{Z}  
 XXX20E.N.R...{Z}  
 XXX20EAN.R...{Z}  
 XXX20EBN.R...{Z}  
 XXX22EDN.R...{Z}  
 XXX22GDN.R...{Z}  
 XXX22GRN.R...{Z}  
 XXX22GSN.R...{Z}  
 XXX22GTN.R...{Z}  
 XXX22ABN.R...{Z}  
 XXX22BBN.R...{Z}  
 XXX22CBN.R...{Z}  
 XXX22DBN.R...{Z}  
 XXX22HBN.R...{Z}  
 XXX21E.N.R...{Z}  
 XXX21EAN.R...{Z}  
 XXX21EBN.R...{Z}  
 XXX22.BFR...{Z}  
 XXX20E.FR...{Z}  
 XXX20EAF.R...{Z}  
 XXX20EBFR...{Z}  
 XXX22EDFR...{Z}  
 XXX22GDFR...{Z}  
 XXX22GRFR...{Z}  
 XXX22GSFR...{Z}  
 XXX22GTFR...{Z}  
 XXX22ABFR...{Z}  
 XXX22BBFR...{Z}  
 XXX22CBFR...{Z}  
 XXX22DBFR...{Z}  
 XXX22HBFR...{Z}  
 XXX21E.FR...{Z}  
 XXX21EAFR...{Z}  
 XXX21EBFR...{Z}

**XXX22.C..R...{Z}**

XXX22.CN.R...{Z}  
 XXX20F.N.R...{Z}  
 XXX22EEN.R...{Z}  
 XXX22GEN.R...{Z}  
 XXX22ACN.R...{Z}  
 XXX22BCN.R...{Z}  
 XXX22CCN.R...{Z}

**ASSETS (continued)**

Securities Other Depository Corporations FC  
 Securities Other Financial Corporations FC  
 Securities Banking Restructuring Agencies FC  
 Securities Other Financial Corporations Other FC  
 Securities Central Government FC  
 Securities State and Local Government FC  
 Securities Public Nonfinancial Corporations FC  
 Securities Other Nonfinancial Corporations FC  
 Securities Other Resident Sectors FC  
 Securities Nonresidents FC

**LOANS**

In National Currency  
 Loans Central Bank NC  
 Repurchase Agreements Central Bank NC  
 Other Loans to Central Bank NC  
 Loans Other Depository Corporations NC  
 Loans Other Financial Corporations NC  
 Repurchase Agreements Other Financial Corporations NC  
 Loans Banking Restructuring Agencies NC  
 Other Loans to Other Financial Corporations NC  
 Loans Central Government NC  
 Loans State and Local Government NC  
 Loans Public Nonfinancial Corporations NC  
 Loans Other Nonfinancial Corporations NC  
 Loans Other Resident Sectors NC  
 Loans Nonresidents NC  
 Repurchase Agreements Nonresidents NC  
 Other Loans to Nonresidents NC  
 In Foreign Currency  
 Loans Central Bank FC  
 Repurchase Agreements Central Bank FC  
 Other Loans to Central Bank FC  
 Loans Other Depository Corporations FC  
 Loans Other Financial Corporations FC  
 Repurchase Agreements Other Financial Corporations FC  
 Loans Banking Restructuring Agencies FC  
 Other Loans to Other Financial Corporations FC  
 Loans Central Government FC  
 Loans State and Local Government FC  
 Loans Public Nonfinancial Corporations FC  
 Loans Other Nonfinancial Corporations FC  
 Loans Other Resident Sectors FC  
 Loans Nonresidents FC  
 Repurchase Agreements Nonresidents FC  
 Other Loans to Nonresidents FC

**SHARES AND OTHER EQUITY**

In National Currency  
 Shares Central Bank NC  
 Shares Other Depository Corporations NC  
 Shares Other Financial Corporations NC  
 Shares Central Government NC  
 Shares State and Local Government NC  
 Shares Public Nonfinancial Corporations NC

**REPORT FORM 2SR FOR OTHER DEPOSITORY CORPORATIONS (continued)**

XXX22DCN.R...{Z}  
 XXX21F.N.R...{Z}  
 XXX22.CFR...{Z}  
 XXX20FF.R...{Z}  
 XXX22EEFR...{Z}  
 XXX22GEFR...{Z}  
 XXX22ACFR...{Z}  
 XXX22BCFR...{Z}  
 XXX22CCFR...{Z}  
 XXX22DCFR...{Z}  
 XXX21F.F.R...{Z}

**XXX22.D.R...{Z}**  
 XXX22.DN.R...{Z}  
 XXX22EFN.R...{Z}  
 XXX22GFN.R...{Z}  
 XXX21G.N.R...{Z}  
 XXX22.DFR...{Z}  
 XXX22EFFR...{Z}  
 XXX22GFFR...{Z}  
 XXX21G.FR...{Z}

**XXX22.E..R...{Z}**  
 XXX22.EN.R...{Z}  
 XXX20G.N.R...{Z}  
 XXX22EGN.R...{Z}  
 XXX22GGN.R...{Z}  
 XXX22ADN.R...{Z}  
 XXX22BDN.R...{Z}  
 XXX22CDN.R...{Z}  
 XXX22DDN.R...{Z}  
 XXX22HDN.R...{Z}  
 XXX21H.N.R...{Z}  
 XXX22.EFR...{Z}  
 XXX20G.FR...{Z}  
 XXX22EGFR...{Z}  
 XXX22GGFR...{Z}  
 XXX22ADFR...{Z}  
 XXX22BDFR...{Z}  
 XXX22CDFR...{Z}  
 XXX22DDFR...{Z}  
 XXX22HDFR...{Z}  
 XXX21H.FR...{Z}

**XXX22.F.R...{Z}**  
 XXX22.G..R...{Z}  
 XXX22.GN.R...{Z}  
 XXX20H.N.R...{Z}  
 XXX22EHN.R...{Z}  
 XXX22GHN.R...{Z}  
 XXX22AEN.R...{Z}  
 XXX22BEN.R...{Z}  
 XXX22CEN.R...{Z}  
 XXX22DEN.R...{Z}  
 XXX22HEN.R...{Z}  
 XXX21I.N.R...{Z}

**ASSETS (continued)**

Shares Other Nonfinancial Corporations NC  
 Shares Nonresidents NC  
 In Foreign Currency  
 Shares Central Bank FC  
 Shares Other Depository Corporations FC  
 Shares Other Financial Corporations FC  
 Shares Central Government FC  
 Shares State and Local Government FC  
 Shares Public Nonfinancial Corporations FC  
 Shares Other Nonfinancial Corporations FC  
 Shares Nonresidents FC

**INSURANCE TECHNICAL RESERVES**

In National Currency  
 Insurance Technical Reserves Other Depository Corporations NC  
 Insurance Technical Reserves Other Financial Corporations NC  
 Insurance Technical Reserves Nonresidents NC  
 In Foreign Currency  
 Insurance Technical Reserves Other Depository Corporations FC  
 Insurance Technical Reserves Other Financial Corporations FC  
 Insurance Technical Reserves Nonresidents FC

**FINANCIAL DERIVATIVES**

In National Currency  
 Financial Derivatives Central Bank NC  
 Financial Derivatives Other Depository Corporations NC  
 Financial Derivatives Other Financial Corporations NC  
 Financial Derivatives Central Government NC  
 Financial Derivatives State and Local Government NC  
 Financial Derivatives Public Nonfinancial Corporations NC  
 Financial Derivatives Other Nonfinancial Corporations NC  
 Financial Derivatives Other Resident Sectors NC  
 Financial Derivatives Nonresidents NC  
 In Foreign Currency  
 Financial Derivatives Central Bank FC  
 Financial Derivatives Other Depository Corporations FC  
 Financial Derivatives Other Financial Corporations FC  
 Financial Derivatives Central Government FC  
 Financial Derivatives State and Local Government FC  
 Financial Derivatives Public Nonfinancial Corporations FC  
 Financial Derivatives Other Nonfinancial Corporations FC  
 Financial Derivatives Other Resident Sectors FC  
 Financial Derivatives Nonresidents FC

**OTHER ACCOUNTS RECEIVABLE**

**TRADE CREDIT AND ADVANCES**

In National Currency  
 Trade Credit/Advances Central Bank NC  
 Trade Credit/Advances Other Depository Corporations NC  
 Trade Credit/Advances Other Financial Corporations NC  
 Trade Credit/Advances Central Government NC  
 Trade Credit/Advances State and Local Government NC  
 Trade Credit/Advances Public Nonfinancial Corporations NC  
 Trade Credit/Advances Other Nonfinancial Corporations NC  
 Trade Credit/Advances Other Resident Sectors NC  
 Trade Credit/Advances Nonresidents NC

**REPORT FORM 2SR FOR OTHER DEPOSITORY CORPORATIONS (continued)**

XXX22.GFR...{Z}	<b>ASSETS (continued)</b>
XXX20H.FR...{Z}	In Foreign Currency
XXX22EHFR...{Z}	Trade Credit/Advances Central Bank FC
XXX22GHFR...{Z}	Trade Credit/Advances Other Depository Corporations FC
XXX22AEFR...{Z}	Trade Credit/Advances Other Financial Corporations FC
XXX22BEFR...{Z}	Trade Credit/Advances Central Government FC
XXX22CEFR...{Z}	Trade Credit/Advances State and Local Government FC
XXX22DEFR...{Z}	Trade Credit/Advances Public Nonfinancial Corporations FC
XXX22HEFR...{Z}	Trade Credit/Advances Other Nonfinancial Corporations FC
XXX21I.FR...{Z}	Trade Credit/Advances Other Resident Sectors FC
XXX22.H.R...{Z}	Trade Credit/Advances Nonresidents FC
XXX23A...R...{Z}	<b>OTHER ACCOUNTS RECEIVABLE OTHER</b>
XXX23A.N.R...{Z}	Other Accounts Receivable Other Resident Sectors
XXX23AAN.R...{Z}	In National Currency
XXX23ABN.R...{Z}	Dividends Receivable Residents NC
XXX20I.N.R...{Z}	Settlement Accounts Residents NC
XXX22EIN.R...{Z}	Settlement Accounts Central Bank NC
XXX22GIN.R...{Z}	Settlement Accounts Other Depository Corporations NC
XXX22AFN.R...{Z}	Settlement Accounts Other Financial Corporations NC
XXX22BFN.R...{Z}	Settlement Accounts Central Government NC
XXX22CFN.R...{Z}	Settlement Accounts State and Local Government NC
XXX22DFN.R...{Z}	Settlement Accounts Public Nonfinancial Corporations NC
XXX22HFN.R...{Z}	Settlement Accounts Other Nonfinancial Corporations NC
XXX23ACN.R...{Z}	Settlement Accounts Other Resident Sectors NC
XXX23ADN.R...{Z}	Items in the Process of Collection Residents NC
XXX23A.FR...{Z}	Miscellaneous Asset Items Residents NC
XXX23AAF.R...{Z}	In Foreign Currency
XXX23ABFR...{Z}	Dividends Receivable Residents FC
XXX20I.FR...{Z}	Settlement Accounts Residents FC
XXX22EIFR...{Z}	Settlement Accounts Central Bank FC
XXX22GIFR...{Z}	Settlement Accounts Other Depository Corporations FC
XXX22AFFR...{Z}	Settlement Accounts Other Financial Corporations FC
XXX22BFFR...{Z}	Settlement Accounts Central Government FC
XXX22CFFR...{Z}	Settlement Accounts State and Local Government FC
XXX22DFFR...{Z}	Settlement Accounts Public Nonfinancial Corporations FC
XXX22HFFR...{Z}	Settlement Accounts Other Nonfinancial Corporations FC
XXX23ACFR...{Z}	Settlement Accounts Other Resident Sectors FC
XXX23ADFR...{Z}	Items in the Process of Collection Residents FC
XXX21J...R...{Z}	Miscellaneous Asset Items Residents FC
XXX21J.N.R...{Z}	Other Accounts Receivable Other Nonresidents
XXX21JAN.R...{Z}	Other Accounts Receivable Other Nonresidents NC
XXX21JBN.R...{Z}	Dividends Receivable Nonresidents NC
XXX21JCN.R...{Z}	Settlement Accounts Nonresidents NC
XXX21JDN.R...{Z}	Items in the Process of Collection Nonresidents NC
XXX21J.FR...{Z}	Miscellaneous Asset Items Nonresidents NC
XXX21JAFR...{Z}	Other Accounts Receivable Other Nonresidents FC
XXX21JBFR...{Z}	Dividends Receivable Nonresidents FC
XXX21JCFR...{Z}	Settlement Accounts FC
XXX21JDFR...{Z}	Items in the Process of Collection FC
	Miscellaneous Asset Items Nonresidents FC
<b>XXX23B...R...{Z}</b>	<b>NONFINANCIAL ASSETS</b>
XXX23BA..R...{Z}	Fixed Assets
XXX23BB..R...{Z}	Other Nonfinancial Assets
<b>XXX20RA..R...{Z}</b>	<b>TOTAL ASSETS</b>

**REPORT FORM 2SR FOR OTHER DEPOSITORY CORPORATIONS (continued)**

**LIABILITIES**

**XXX24....R...{Z}**

XXX24.A.R...{Z}  
 XXX24.AN.R...{Z}  
 XXX24JAN.R...{Z}  
 XXX24DAN.R...{Z}  
 XXX24EAN.R...{Z}  
 XXX24FAN.R...{Z}  
 XXX24GAN.R...{Z}  
 XXX24.AFR...{Z}  
 XXX24JAFR...{Z}  
 XXX24DAFR...{Z}  
 XXX24EAFR...{Z}  
 XXX24FAFR...{Z}  
 XXX24GAFR...{Z}  
 XXX25.A.R...{Z}  
 XXX25.AN.R...{Z}  
 XXX25JAN.R...{Z}  
 XXX25DAN.R...{Z}  
 XXX25EAN.R...{Z}  
 XXX25FAN.R...{Z}  
 XXX25GAN.R...{Z}  
 XXX25.AFR...{Z}  
 XXX25JAFR...{Z}  
 XXX25DAFR...{Z}  
 XXX25EAFR...{Z}  
 XXX25FAFR...{Z}  
 XXX25GAFR...{Z}

**XXX26.A..R...{Z}**

XXX26.F.R...{Z}  
 XXX26.FN.R...{Z}  
 XXX26GAN.R...{Z}  
 XXX26HAN.R...{Z}  
 XXX26JBN.R...{Z}  
 XXX26JLN.R...{Z}  
 XXX26JMN.R...{Z}  
 XXX26PAN.R...{Z}  
 XXX26FAN.R...{Z}  
 XXX26EAN.R...{Z}  
 XXX26DAN.R...{Z}  
 XXX26BAN.R...{Z}  
 XXX26BCN.R...{Z}  
 XXX26BEN.R...{Z}  
 XXX26BGN.R...{Z}  
 XXX26CAN.R...{Z}  
 XXX26.FFR...{Z}  
 XXX26GAFR...{Z}  
 XXX26HAFR...{Z}  
 XXX26JBF.R...{Z}  
 XXX26JLFR...{Z}  
 XXX26JMFR...{Z}  
 XXX26PAFR...{Z}  
 XXX26FAFR...{Z}  
 XXX26DAFR...{Z}

**DEPOSITS INCLUDED IN BROAD MONEY**

**TRANSFERABLE DEPOSITS**

**In National Currency**

Transf. Dep. Other Financial Corporations NC  
 Transf. Dep. State and Local Government NC  
 Transf. Dep. Public Nonfinancial Corporations NC  
 Transf. Dep. Other Nonfinancial Corporations NC  
 Transf. Dep. Other Resident Sectors NC

**In Foreign Currency**

Transf. Dep. Other Financial Corporations FC  
 Transf. Dep. State and Local Government FC  
 Transf. Dep. Public Nonfinancial Corporations FC  
 Transf. Dep. Other Nonfinancial Corporations FC  
 Transf. Dep. Other Resident Sectors FC

**OTHER DEPOSITS**

**In National Currency**

Other Dep. Other Financial Corporations NC  
 Other Dep. State and Local Government NC  
 Other Dep. Public Nonfinancial Corporations NC  
 Other Dep. Other Nonfinancial Corporations NC  
 Other Dep. Other Resident Sectors NC

**In Foreign Currency**

Other Dep. Other Financial Corporations FC  
 Other Dep. State and Local Government FC  
 Other Dep. Public Nonfinancial Corporations FC  
 Other Dep. Other Nonfinancial Corporations FC  
 Other Dep. Other Resident Sectors FC

**DEPOSITS EXCLUDED FROM BROAD MONEY**

**TRANSFERABLE DEPOSITS**

**In National Currency**

Transf. Dep. Excl. Central Bank NC  
 Transf. Dep. Excl. Other Depository Corporations NC  
 Transf. Dep. Excl. Other Financial Corporations NC  
 Transf. Dep. Excl. Banking Restructuring Agencies NC  
 Transf. Dep. Excl. Other Financial Corporations Other NC  
 Transf. Dep. Excl. Central Government NC  
 Transf. Dep. Government Lending Funds NC  
 Transf. Dep. Counterpart Funds NC  
 Transf. Dep. Excl. Central Government Other NC  
 Transf. Dep. Excl. State and Local Government NC  
 Transf. Dep. Excl. Public Nonfinancial Corporations NC  
 Transf. Dep. Excl. Other Nonfinancial Corporations NC  
 Transf. Dep. Excl. Other Resident Sectors NC  
 Transf. Dep. Excl. Nonresidents NC

**In Foreign Currency**

Transf. Dep. Excl. Central Bank FC  
 Transf. Dep. Excl. Other Depository Corporations FC  
 Transf. Dep. Excl. Other Financial Corporations FC  
 Transf. Dep. Excl. Banking Restructuring Agencies FC  
 Transf. Dep. Excl. Other Financial Corporations Other FC  
 Transf. Dep. Excl. Central Government FC  
 Transf. Dep. Government Lending Funds FC  
 Transf. Dep. Excl. Central Government Other FC

## REPORT FORM 2SR FOR OTHER DEPOSITORY CORPORATIONS (continued)

XXX26BAFR...{Z}	Transf. Dep. Excl. State and Local Government FC
XXX26BCFR...{Z}	Transf. Dep. Excl. Public Nonfinancial Corporations FC
XXX26BEFR...{Z}	Transf. Dep. Excl. Other Nonfinancial Corporations FC
XXX26BGFR...{Z}	Transf. Dep. Excl. Other Resident Sectors FC
XXX26CAFR...{Z}	Transf. Dep. Excl. Nonresidents FC
XXX26.G..R...{Z}	
XXX26.GN.R...{Z}	<b>OTHER DEPOSITS</b>
XXX26GBN.R...{Z}	In National Currency
XXX26HBN.R...{Z}	Other Dep. Excl. Central Bank NC
XXX26JCN.R...{Z}	Other Dep. Excl. Other Depository Corporations NC
XXX26JNN.R...{Z}	Other Dep. Excl. Other Financial Corporations NC
XXX26JON.R...{Z}	Other Dep. Excl. Banking Restructuring Agencies NC
XXX26PBN.R...{Z}	Other Dep. Excl. Other Financial Corporations Other NC
XXX26FBN.R...{Z}	Other Dep. Excl. Central Government NC
XXX26EBN.R...{Z}	Other Dep. Government Lending Funds NC
XXX26DBN.R...{Z}	Other Dep. Counterpart Funds NC
XXX26BBN.R...{Z}	Other Dep. Excl. Central Government Other NC
XXX26BDN.R...{Z}	Other Dep. Excl. State and Local Government NC
XXX26BFN.R...{Z}	Other Dep. Excl. Public Nonfinancial Corporations NC
XXX26BHN.R...{Z}	Other Dep. Excl. Other Nonfinancial Corporations NC
XXX26CBN.R...{Z}	Other Dep. Excl. Other Resident Sectors NC
XXX26.GFR...{Z}	Other Dep. Excl. Nonresidents NC
XXX26GBFR...{Z}	In Foreign Currency
XXX26HBF.R...{Z}	Other Dep. Excl. Central Bank FC
XXX26JCF.R...{Z}	Other Dep. Excl. Other Depository Corporations FC
XXX26JNFR...{Z}	Other Dep. Excl. Other Financial Corporations FC
XXX26JOF.R...{Z}	Other Dep. Excl. Banking Restructuring Agencies FC
XXX26PBF.R...{Z}	Other Dep. Excl. Other Financial Corporations Other FC
XXX26FBF.R...{Z}	Other Dep. Excl. Central Government FC
XXX26DBF.R...{Z}	Other Dep. Government Lending Funds FC
XXX26BBF.R...{Z}	Other Dep. Excl. Central Government Other FC
XXX26BDF.R...{Z}	Other Dep. Excl. State and Local Government FC
XXX26BFF.R...{Z}	Other Dep. Excl. Public Nonfinancial Corporations FC
XXX26BHF.R...{Z}	Other Dep. Excl. Other Nonfinancial Corporations FC
XXX26CBF.R...{Z}	Other Dep. Excl. Other Resident Sectors FC
	Other Dep. Excl. Nonresidents FC
<b>XXX26.J..R...{Z}</b>	<b>SECURITIES OTHER THAN SHARES, INCLUDED IN BROAD MONEY</b>
XXX26.JN.R...{Z}	In National Currency
XXX26JAN.R...{Z}	Securities Other Financial Corporations NC
XXX26AAN.R...{Z}	Securities State and Local Government NC
XXX26ABN.R...{Z}	Securities Public Nonfinancial Corporations NC
XXX26ACN.R...{Z}	Securities Other Nonfinancial Corporations NC
XXX26ADN.R...{Z}	Securities Other Resident Sectors NC
XXX26.JFR...{Z}	In Foreign Currency
XXX26JAF.R...{Z}	Securities Other Financial Corporations FC
XXX26AAF.R...{Z}	Securities State and Local Government FC
XXX26ABF.R...{Z}	Securities Public Nonfinancial Corporations FC
XXX26ACF.R...{Z}	Securities Other Nonfinancial Corporations FC
XXX26ADF.R...{Z}	Securities Other Resident Sectors FC
<b>XXX26.N..R...{Z}</b>	<b>SECURITIES OTHER THAN SHARES, EXCLUDED FROM BROAD MONEY</b>
XXX26.NN.R...{Z}	In National Currency
XXX26GCN.R...{Z}	Securities Excl. Central Bank NC
XXX26HCN.R...{Z}	Securities Excl. Other Depository Corporations NC
XXX26JDN.R...{Z}	Securities Excl. Other Financial Corporations NC

**REPORT FORM 2SR FOR OTHER DEPOSITORY CORPORATIONS (continued)**

XXX26DCN.R...{Z}  
 XXX26SAN.R...{Z}  
 XXX26SBN.R...{Z}  
 XXX26SCN.R...{Z}  
 XXX26SDN.R...{Z}  
 XXX26CCN.R...{Z}  
 XXX26.NFR...{Z}  
 XXX26GCFR...{Z}  
 XXX26HCFR...{Z}  
 XXX26JDFR...{Z}  
 XXX26DCF.R...{Z}  
 XXX26SAFR...{Z}  
 XXX26SBR...{Z}  
 XXX26SCFR...{Z}  
 XXX26SDFR...{Z}  
 XXX26CCFR...{Z}

**XXX26.O.R...{Z}**  
 XXX26.ON.R...{Z}  
 XXX26GDN.R...{Z}  
 XXX26GRN.R...{Z}  
 XXX26GSN.R...{Z}  
 XXX26HDN.R...{Z}  
 XXX26JEN.R...{Z}  
 XXX26JRN.R...{Z}  
 XXX26JSN.R...{Z}  
 XXX26JTN.R...{Z}  
 XXX26DDN.R...{Z}  
 XXX26LAN.R...{Z}  
 XXX26LBN.R...{Z}  
 XXX26LCN.R...{Z}  
 XXX26LDN.R...{Z}  
 XXX26CDN.R...{Z}  
 XXX26CSN.R...{Z}  
 XXX26CVN.R...{Z}  
 XXX26.OFR...{Z}  
 XXX26GDFR...{Z}  
 XXX26GRFR...{Z}  
 XXX26GSFR...{Z}  
 XXX26HDFR...{Z}  
 XXX26JEFR...{Z}  
 XXX26JRFR...{Z}  
 XXX26JSFR...{Z}  
 XXX26JTFR...{Z}  
 XXX26DDFR...{Z}  
 XXX26LAFR...{Z}  
 XXX26LBF.R...{Z}  
 XXX26LCFR...{Z}  
 XXX26LDFR...{Z}  
 XXX26CDFR...{Z}  
 XXX26CSFR...{Z}  
 XXX26CVFR...{Z}

**LIABILITIES (continued)**

Securities Excl. Central Government NC  
 Securities Excl. State and Local Government NC  
 Securities Excl. Public Nonfinancial Corporations NC  
 Securities Excl. Other Nonfinancial Corporations NC  
 Securities Excl. Other Resident Sectors NC  
 Securities Excl. Nonresidents NC  
 In Foreign Currency  
 Securities Excl. Central Bank FC  
 Securities Excl. Other Depository Corporations FC  
 Securities Excl. Other Financial Corporations FC  
 Securities Excl. Central Government FC  
 Securities Excl. State and Local Government FC  
 Securities Excl. Public Nonfinancial Corporations FC  
 Securities Excl. Other Nonfinancial Corporations FC  
 Securities Excl. Other Resident Sectors FC  
 Securities Excl. Nonresidents FC

**LOANS**

In National Currency  
 Loans Central Bank NC  
 Repurchase Agreements Central Bank NC  
 Other Loans from Central Bank NC  
 Loans Other Depository Corporations NC  
 Loans Other Financial Corporations NC  
 Repurchase Agreements Other Financial Corporations NC  
 Loans Banking Restructuring Agencies NC  
 Other Loans from Other Financial Corporations NC  
 Loans Central Government NC  
 Loans State and Local Government NC  
 Loans Public Nonfinancial Corporations NC  
 Loans Other Nonfinancial Corporations NC  
 Loans Other Resident Sectors NC  
 Loans Nonresidents NC  
 Repurchase Agreements Nonresidents NC  
 Other Loans from Nonresidents NC  
 In Foreign Currency  
 Loans Central Bank FC  
 Repurchase Agreements Central Bank FC  
 Other Loans from Central Bank FC  
 Loans Other Depository Corporations FC  
 Loans Other Financial Corporations FC  
 Repurchase Agreements Other Financial Corporations FC  
 Loans Banking Restructuring Agencies FC  
 Other Loans from Other Financial Corporations FC  
 Loans Central Government FC  
 Loans State and Local Government FC  
 Loans Public Nonfinancial Corporations FC  
 Loans Other Nonfinancial Corporations FC  
 Loans Other Resident Sectors FC  
 Loans Nonresidents FC  
 Repurchase Agreements Nonresidents FC  
 Other Loans from Nonresidents FC

**REPORT FORM 2SR FOR OTHER DEPOSITORY CORPORATIONS (continued)****XXX26R...R...{Z}**

XXX26R.N.R...{Z}  
 XXX26RGN.R...{Z}  
 XXX26RDN.R...{Z}  
 XXX26CGN.R...{Z}  
 XXX26RHN.R...{Z}  
 XXX26REN.R...{Z}  
 XXX26CHN.R...{Z}  
 XXX26RIN.R...{Z}  
 XXX26GHN.R...{Z}  
 XXX26HHN.R...{Z}  
 XXX26JIN.R...{Z}  
 XXX26DHN.R...{Z}  
 XXX26RAN.R...{Z}  
 XXX26RBN.R...{Z}  
 XXX26RCN.R...{Z}  
 XXX26RFN.R...{Z}  
 XXX26CIN.R...{Z}  
 XXX26R.FR...{Z}  
 XXX26RGFR...{Z}  
 XXX26RDFR...{Z}  
 XXX26CGFR...{Z}  
 XXX26RHRFR...{Z}  
 XXX26REFR...{Z}  
 XXX26CHFR...{Z}  
 XXX26RIFR...{Z}  
 XXX26GHFR...{Z}  
 XXX26HHFR...{Z}  
 XXX26JIFR...{Z}  
 XXX26DHFR...{Z}  
 XXX26RAFR...{Z}  
 XXX26RBF...{Z}  
 XXX26RCFR...{Z}  
 XXX26RFFR...{Z}  
 XXX26CIFR...{Z}

**XXX26.P.R...{Z}**

XXX26.PN.R...{Z}  
 XXX26GEN.R...{Z}  
 XXX26HEN.R...{Z}  
 XXX26JFN.R...{Z}  
 XXX26DEN.R...{Z}  
 XXX26MAN.R...{Z}  
 XXX26MBN.R...{Z}  
 XXX26MCN.R...{Z}  
 XXX26MDN.R...{Z}  
 XXX26CEN.R...{Z}  
 XXX26.PFR...{Z}  
 XXX26GEFR...{Z}  
 XXX26HEFR...{Z}  
 XXX26JFFR...{Z}  
 XXX26DEFR...{Z}  
 XXX26MAFR...{Z}  
 XXX26MBFR...{Z}  
 XXX26MCFR...{Z}

**LIABILITIES (continued)****INSURANCE TECHNICAL RESERVES**

## In National Currency

Net Equity of Households in Life Insurance Reserves NC  
 Net Equity of Households in Life Insurance Reserves Residents NC  
 Net Equity of Households in Life Insurance Reserves Nonresidents NC  
 Net Equity of Households in Pension Funds NC  
 Net Equity of Households in Pension Funds Residents NC  
 Net Equity of Households in Pension Funds Nonresidents NC  
 Prepayment of Premiums and Reserves Against Outstanding Claims NC  
 Prep.Premiums/Res.Claims Central Bank NC  
 Prep.Premiums/Res.Claims Other Depository Corporations NC  
 Prep.Premiums/Res.Claims Other Financial Corporations NC  
 Prep.Premiums/Res.Claims Central Government NC  
 Prep.Premiums/Res.Claims State and Local Government NC  
 Prep.Premiums/Res.Claims Public Nonfinancial Corporations NC  
 Prep.Premiums/Res.Claims Other Nonfinancial Corporations NC  
 Prep.Premiums/Res.Claims Other Resident Sectors NC  
 Prep.Premiums/Res.Claims Nonresidents NC

## In Foreign Currency

Net Equity of Households in Life Insurance Reserves FC  
 Net Equity of Households in Life Insurance Reserves Residents FC  
 Net Equity of Households in Life Insurance Reserves Nonresidents FC  
 Net Equity of Households in Pension Funds FC  
 Net Equity of Households in Pension Funds Residents FC  
 Net Equity of Households in Pension Funds Nonresidents FC  
 Prepayment of Premiums and Reserves Against Outstanding Claims FC  
 Prep.Premiums/Res.Claims Central Bank FC  
 Prep.Premiums/Res.Claims Other Depository Corporations FC  
 Prep.Premiums/Res.Claims Other Financial Corporations FC  
 Prep.Premiums/Res.Claims Central Government FC  
 Prep.Premiums/Res.Claims State and Local Government FC  
 Prep.Premiums/Res.Claims Public Nonfinancial Corporations FC  
 Prep.Premiums/Res.Claims Other Nonfinancial Corporations FC  
 Prep.Premiums/Res.Claims Other Resident Sectors FC  
 Prep.Premiums/Res.Claims Nonresidents FC

**FINANCIAL DERIVATIVES**

## In National Currency

Financial Derivatives Central Bank NC  
 Financial Derivatives Other Depository Corporations NC  
 Financial Derivatives Other Financial Corporations NC  
 Financial Derivatives Central Government NC  
 Financial Derivatives State and Local Government NC  
 Financial Derivatives Public Nonfinancial Corporations NC  
 Financial Derivatives Other Nonfinancial Corporations NC  
 Financial Derivatives Other Resident Sectors NC  
 Financial Derivatives Nonresidents NC

## In Foreign Currency

Financial Derivatives Central Bank FC  
 Financial Derivatives Other Depository Corporations FC  
 Financial Derivatives Other Financial Corporations FC  
 Financial Derivatives Central Government FC  
 Financial Derivatives State and Local Government FC  
 Financial Derivatives Public Nonfinancial Corporations FC  
 Financial Derivatives Other Nonfinancial Corporations FC



**REPORT FORM 2SR FOR OTHER DEPOSITORY CORPORATIONS (continued)**

XXX26MDFR...{Z}

XXX26CEFR...{Z}

**XXX27...R...{Z}**

XXX26.Q..R...{Z}

XXX26.QN.R...{Z}

XXX26GFN.R...{Z}

XXX26HFN.R...{Z}

XXX26JGN.R...{Z}

XXX26DFN.R...{Z}

XXX26NAN.R...{Z}

XXX26NBN.R...{Z}

XXX26NCN.R...{Z}

XXX26NDN.R...{Z}

XXX26CFN.R...{Z}

XXX26.QFR...{Z}

XXX26GFFR...{Z}

XXX26HFFR...{Z}

XXX26JGFR...{Z}

XXX26DFFR...{Z}

XXX26NAFR...{Z}

XXX26NBFR...{Z}

XXX26NCFR...{Z}

XXX26NDFR...{Z}

XXX26CFFR...{Z}

XXX26.R..R...{Z}

XXX27P...R...{Z}

XXX27PA..R...{Z}

XXX27PB..R...{Z}

XXX27D...R...{Z}

XXX27I...R...{Z}

XXX27B...R...{Z}

XXX27B.N.R...{Z}

XXX27BAN.R...{Z}

XXX27BBN.R...{Z}

XXX26GGN.R...{Z}

XXX26HGN.R...{Z}

XXX26JHN.R...{Z}

XXX26DGN.R...{Z}

XXX26OAN.R...{Z}

XXX26OBN.R...{Z}

XXX26OCN.R...{Z}

XXX26ODN.R...{Z}

XXX27BCN.R...{Z}

XXX27B.FR...{Z}

XXX27BAFR...{Z}

XXX27BBFR...{Z}

XXX26GGFR...{Z}

XXX26HGFR...{Z}

XXX26JHFR...{Z}

XXX26DGF.R...{Z}

XXX26OAF.R...{Z}

XXX26OBF.R...{Z}

XXX26OCF.R...{Z}

XXX26ODF.R...{Z}

XXX27BCF.R...{Z}

**LIABILITIES (continued)**

Financial Derivatives Other Resident Sectors FC

Financial Derivatives Nonresidents FC

**OTHER ACCOUNTS PAYABLE**

**TRADE CREDIT AND ADVANCES**

In National Currency

Trade Credit/Advances Central Bank NC

Trade Credit/Advances Other Depository Corporations NC

Trade Credit/Advances Other Financial Corporations NC

Trade Credit/Advances Central Government NC

Trade Credit/Advances State and Local Government NC

Trade Credit/Advances Public Nonfinancial Corporations NC

Trade Credit/Advances Other Nonfinancial Corporations NC

Trade Credit/Advances Other Resident Sectors NC

Trade Credit/Advances Nonresidents NC

In Foreign Currency

Trade Credit/Advances Central Bank FC

Trade Credit/Advances Other Depository Corporations FC

Trade Credit/Advances Other Financial Corporations FC

Trade Credit/Advances Central Government FC

Trade Credit/Advances State and Local Government FC

Trade Credit/Advances Public Nonfinancial Corporations FC

Trade Credit/Advances Other Nonfinancial Corporations FC

Trade Credit/Advances Other Resident Sectors FC

Trade Credit/Advances Nonresidents FC

**OTHER ACCOUNTS PAYABLE OTHER**

Provisions for Losses

Provisions for Loan Losses

Provisions for Other Losses

Accumulated Depreciation

Consolidation Adjustment for Headquarter and Branches

Other Accounts Payable Other Resident Sectors

In National Currency

Dividends Payable Residents NC

Settlement Accounts Residents NC

Settlement Accounts Central Bank NC

Settlement Accounts Other Depository Corporations NC

Settlement Accounts Other Financial Corporations NC

Settlement Accounts Central Government NC

Settlement Accounts State and Local Government NC

Settlement Accounts Public Nonfinancial Corporations NC

Settlement Accounts Other Nonfinancial Corporations NC

Settlement Accounts Other Resident Sectors NC

Miscellaneous Liability Items Residents NC

In Foreign Currency

Dividends Payable Residents FC

Settlement Accounts Residents FC

Settlement Accounts Central Bank FC

Settlement Accounts Other Depository Corporations FC

Settlement Accounts Other Financial Corporations FC

Settlement Accounts Central Government FC

Settlement Accounts State and Local Government FC

Settlement Accounts Public Nonfinancial Corporations FC

Settlement Accounts Other Nonfinancial Corporations FC

Settlement Accounts Other Resident Sectors FC

Miscellaneous Liability Items Residents FC

**REPORT FORM 2SR FOR OTHER DEPOSITORY CORPORATIONS (continued)**

XXX26CJ..R...{Z}	<b>LIABILITIES (continued)</b>
XXX26CJN.R...{Z}	Other Accounts Payable Other Nonresidents
XXX26CKN.R...{Z}	Other Accounts Payable Other Nonresidents NC
XXX26CLN.R...{Z}	Dividends Payable Nonresidents NC
XXX26CMN.R...{Z}	Settlement Accounts Nonresidents NC
XXX26CJFR...{Z}	Miscellaneous Liability Items Nonresidents NC
XXX26CKFR...{Z}	Other Accounts Payable Other Nonresidents FC
XXX26CLFR...{Z}	Dividends Payable Nonresidents FC
XXX26CMFR...{Z}	Settlement Accounts Nonresidents FC
	Miscellaneous Liability Items Nonresidents FC
<b>XXX27A...R...{Z}</b>	<b>SHARES AND OTHER EQUITY</b>
XXX27AA..R...{Z}	Funds Contributed by Owners
XXX27AAN.R...{Z}	Funds Contributed by Owners NC
XXX27AAF.R...{Z}	Funds Contributed by Owners FC
XXX27AB..R...{Z}	Retained Earnings
XXX27AC..R...{Z}	Current Year Result
XXX27AD..R...{Z}	General and Special Reserves
XXX27RV..R...{Z}	Valuation Adjustment
<b>XXX20RL..R...{Z}</b>	<b>TOTAL LIABILITIES</b>
XXX20R.V.R...{Z}	Vertical Check
	<b>MEMORANDUM ITEMS</b>
XXX20EX..R...{Z}	End of Period Exchange Rate
	<b>ASSETS</b>
XXX23KA..R...{Z}	ACCRUED INTEREST ON LOANS
XXX23KB..R...{Z}	ARREARS ON LOANS (PRINCIPAL AND INTEREST)
XXX23KC..R...{Z}	EXPECTED LOSSES ON LOANS
XXX23KCA.R...{Z}	Other Depository Corporations
XXX23KCB.R...{Z}	Other Financial Corporations
XXX23KCC.R...{Z}	Central Government
XXX23KCD.R...{Z}	State and Local Government
XXX23KCE.R...{Z}	Public Nonfinancial Corporations
XXX23KCF.R...{Z}	Other Nonfinancial Corporations
XXX23KCG.R...{Z}	Other Resident Sectors
XXX23KCH.R...{Z}	Nonresidents
XXX23KD..R...{Z}	ACCRUED INTEREST ON SECURITIES OTHER THAN SHARES
XXX23L...R...{Z}	CLAIMS ON OTHER DEPOSITORY CORPORATIONS IN LIQUIDATION
XXX23LA..R...{Z}	TRANSFERABLE DEPOSITS
XXX23LAN.R...{Z}	Transf. Dep. Other Depository Corporations In Liquidation NC
XXX23LAF.R...{Z}	Transf. Dep. Other Depository Corporations In Liquidation FC
XXX23LB..R...{Z}	OTHER DEPOSITS
XXX23LBN.R...{Z}	Other Dep. Other Depository Corporations In Liquidation NC
XXX23LBF.R...{Z}	Other Dep. Other Depository Corporations In Liquidation FC
XXX23LC..R...{Z}	SECURITIES OTHER THAN SHARES
XXX23LCN.R...{Z}	Securities Other Depository Corporations In Liquidation NC
XXX23LCFR...{Z}	Securities Other Depository Corporations In Liquidation FC
XXX23LD..R...{Z}	LOANS
XXX23LDN.R...{Z}	Loans Other Depository Corporations In Liquidation NC
XXX23LDF.R...{Z}	Loans Other Depository Corporations In Liquidation FC
XXX23LE..R...{Z}	SHARES AND OTHER EQUITY
XXX23LF..R...{Z}	FINANCIAL DERIVATIVES
XXX23LFN.R...{Z}	Financial Derivatives Other Depository Corporations In Liquidation NC
XXX23LFF.R...{Z}	Financial Derivatives Other Depository Corporations In Liquidation FC

**REPORT FORM 2SR FOR OTHER DEPOSITORY CORPORATIONS (continued)**

XXX23LG..R...{Z}	<b>MEMORANDUM ITEMS (continued)</b>
XXX23LGN.R...{Z}	OTHER ACCOUNTS RECEIVABLE
XXX23LGF.R...{Z}	Other Accounts Rec. Other Depository Corporations In Liquidation NC
XXX23M...R...{Z}	Other Accounts Rec. Other Depository Corporations In Liquidation FC
XXX23MA..R...{Z}	CLAIMS ON OTHER FINANCIAL CORPORATIONS IN LIQUIDATION
XXX23MAN.R...{Z}	TRANSFERABLE DEPOSITS
XXX23MAF.R...{Z}	Transf. Dep. Other Financial Corporations In Liquidation NC
XXX23MB..R...{Z}	Transf. Dep. Other Financial Corporations In Liquidation FC
XXX23MBN.R...{Z}	OTHER DEPOSITS
XXX23MBF.R...{Z}	Other Dep. Other Financial Corporations In Liquidation NC
XXX23MC..R...{Z}	Other Dep. Other Financial Corporations In Liquidation FC
XXX23MCN.R...{Z}	SECURITIES OTHER THAN SHARES
XXX23MCF.R...{Z}	Securities Other Financial Corporations In Liquidation NC
XXX23MD..R...{Z}	Securities Other Financial Corporations In Liquidation FC
XXX23MDN.R...{Z}	LOANS
XXX23MDF.R...{Z}	Loans Other Financial Corporations In Liquidation NC
XXX23ME..R...{Z}	Loans Other Financial Corporations In Liquidation FC
XXX23MF..R...{Z}	SHARES AND OTHER EQUITY
XXX23MFN.R...{Z}	FINANCIAL DERIVATIVES
XXX23MFF.R...{Z}	Financial Derivatives Other Financial Corporations In Liquidation NC
XXX23MG..R...{Z}	Financial Derivatives Other Financial Corporations In Liquidation FC
XXX23MGN.R...{Z}	OTHER ACCOUNTS RECEIVABLE
XXX23MGF.R...{Z}	Other Accounts Rec. Other Financial Corporations In Liquidation NC
	Other Accounts Rec. Other Financial Corporations In Liquidation FC
	<b>LIABILITIES</b>
XXX27KA..R...{Z}	ACCRUED INTEREST ON LOANS
XXX27KB..R...{Z}	ARREARS ON LOANS (PRINCIPAL AND INTEREST)
XXX27KC..R...{Z}	ACCRUED INTEREST ON SECURITIES OTHER THAN SHARES
XXX27AM..R...{Z}	SHARES AND OTHER EQUITY: MARKET VALUE, BY HOLDING SECTOR
XXX27AMA.R...{Z}	Other Depository Corporations
XXX27AMB.R...{Z}	Other Financial Corporations
XXX27AMC.R...{Z}	Central Government
XXX27AMD.R...{Z}	State and Local Government
XXX27AME.R...{Z}	Public Nonfinancial Corporations
XXX27AMF.R...{Z}	Other Nonfinancial Corporations
XXX27AMG.R...{Z}	Other Resident Sectors
XXX27AMH.R...{Z}	Nonresidents
XXX27L...R...{Z}	LIABILITIES TO OTHER DEPOSITORY CORPORATIONS IN LIQUIDATION
XXX27LA..R...{Z}	TRANSFERABLE DEPOSITS EXCLUDED FROM BROAD MONEY
XXX27LAN.R...{Z}	Transf. Dep. Excl. Other Depository Corporations In Liquidation NC
XXX27LAF.R...{Z}	Transf. Dep. Excl. Other Depository Corporations In Liquidation FC
XXX27LB..R...{Z}	OTHER DEPOSITS EXCLUDED FROM BROAD MONEY
XXX27LBN.R...{Z}	Other Dep. Excl. Other Depository Corporations In Liquidation NC
XXX27LBF.R...{Z}	Other Dep. Excl. Other Depository Corporations In Liquidation FC
XXX27LC..R...{Z}	SECURITIES OTHER THAN SHARES, EXCLUDED FROM BROAD MONEY
XXX27LCN.R...{Z}	Securities Excl. Other Depository Corporations In Liquidation NC
XXX27LCF.R...{Z}	Securities Excl. Other Depository Corporations In Liquidation FC
XXX27LD..R...{Z}	LOANS
XXX27LDN.R...{Z}	Loans Other Depository Corporations In Liquidation NC
XXX27LDF.R...{Z}	Loans Other Depository Corporations In Liquidation FC
XXX27LE..R...{Z}	FINANCIAL DERIVATIVES
XXX27LEN.R...{Z}	Financial Derivatives Other Depository Corporations In Liquidation NC
XXX27LEF.R...{Z}	Financial Derivatives Other Depository Corporations In Liquidation FC

**REPORT FORM 2SR FOR OTHER DEPOSITORY CORPORATIONS (concluded)**

XXX27LF.R...{Z}  
 XXX27LFN.R...{Z}  
 XXX27LFFR...{Z}

XXX27M...R...{Z}  
 XXX27MA.R...{Z}  
 XXX27MAN.R...{Z}  
 XXX27MAFR...{Z}  
 XXX27MB.R...{Z}  
 XXX27MBN.R...{Z}  
 XXX27MBFR...{Z}  
 XXX27MC.R...{Z}  
 XXX27MCN.R...{Z}  
 XXX27MCFR...{Z}  
 XXX27MD.R...{Z}  
 XXX27MDN.R...{Z}  
 XXX27MDFR...{Z}  
 XXX27ME.R...{Z}  
 XXX27MEN.R...{Z}  
 XXX27MEFR...{Z}  
 XXX27MF.R...{Z}  
 XXX27MFN.R...{Z}  
 XXX27MFFR...{Z}

**MEMORANDUM ITEMS (continued)****OTHER ACCOUNTS PAYABLE**

Other Accounts Pay. Other Depository Corporations In Liquidation NC  
 Other Accounts Pay. Other Depository Corporations In Liquidation FC

**LIABILITIES TO OTHER FINANCIAL CORPORATIONS IN LIQUIDATION  
 TRANSFERABLE DEPOSITS EXCLUDED FROM BROAD MONEY**

Transf. Dep. Excl. Other Financial Corporations In Liquidation NC  
 Transf. Dep. Excl. Other Financial Corporations In Liquidation FC

**OTHER DEPOSITS EXCLUDED FROM BROAD MONEY**

Other Dep. Excl. Other Financial Corporations In Liquidation NC  
 Other Dep. Excl. Other Financial Corporations In Liquidation FC

**SECURITIES OTHER THAN SHARES, EXCLUDED FROM BROAD MONEY**

Securities Excl. Other Financial Corporations In Liquidation NC  
 Securities Excl. Other Financial Corporations In Liquidation FC

**LOANS**

Loans Other Financial Corporations In Liquidation NC  
 Loans Other Financial Corporations In Liquidation FC

**FINANCIAL DERIVATIVES**

Financial Derivatives Other Financial Corporations In Liquidation NC  
 Financial Derivatives Other Financial Corporations In Liquidation FC

**OTHER ACCOUNTS PAYABLE**

Other Accounts Pay. Other Financial Corporations In Liquidation NC  
 Other Accounts Pay. Other Financial Corporations In Liquidation FC

**REPORT FORM 4SR FOR OTHER FINANCIAL CORPORATIONS**

**XXX40....R...{Z}**

XXX40.A.R...{Z}  
 XXX40A.N.R...{Z}  
 XXX41A.FR...{Z}  
 XXX40.B.R...{Z}  
 XXX40.BN.R...{Z}  
 XXX40B.N.R...{Z}  
 XXX42EAN.R...{Z}  
 XXX42GAN.R...{Z}  
 XXX41B.N.R...{Z}  
 XXX40.BFR...{Z}  
 XXX40B.FR...{Z}  
 XXX42EAFR...{Z}  
 XXX42GAFR...{Z}  
 XXX41B.FR...{Z}  
 XXX40.C.R...{Z}  
 XXX40.CN.R...{Z}  
 XXX40D.N.R...{Z}  
 XXX42EBN.R...{Z}  
 XXX42GBN.R...{Z}  
 XXX41C.N.R...{Z}  
 XXX40.CFR...{Z}  
 XXX40D.FR...{Z}  
 XXX42EBFR...{Z}  
 XXX42GBFR...{Z}  
 XXX41C.FR...{Z}

**XXX42.A.R...{Z}**

XXX42.AN.R...{Z}  
 XXX40C.N.R...{Z}  
 XXX42ECN.R...{Z}  
 XXX42GCN.R...{Z}  
 XXX42AAN.R...{Z}  
 XXX42BAN.R...{Z}  
 XXX42CAN.R...{Z}  
 XXX42DAN.R...{Z}  
 XXX42HAN.R...{Z}  
 XXX41D.N.R...{Z}  
 XXX42.AFR...{Z}  
 XXX40C.FR...{Z}  
 XXX42ECFR...{Z}  
 XXX42GCFR...{Z}  
 XXX42AAFR...{Z}  
 XXX42BAFR...{Z}  
 XXX42CAFR...{Z}  
 XXX42DAFR...{Z}  
 XXX42HAFR...{Z}  
 XXX41D.FR...{Z}

**XXX42.B.R...{Z}**

XXX42.BN.R...{Z}  
 XXX40E.N.R...{Z}  
 XXX40EAN.R...{Z}  
 XXX40EBN.R...{Z}  
 XXX42EDN.R...{Z}  
 XXX42ERN.R...{Z}  
 XXX42EJN.R...{Z}

**ASSETS**

**CURRENCY AND DEPOSITS**

**CURRENCY**  
 Holdings of National Currency  
 Holdings of Foreign Currency  
**TRANSFERABLE DEPOSITS**  
 In National Currency  
 Transf. Dep. Central Bank NC  
 Transf. Dep. Other Depository Corporations NC  
 Transf. Dep. Other Financial Corporations NC  
 Transf. Dep. Nonresidents NC  
 In Foreign Currency  
 Transf. Dep. Central Bank FC  
 Transf. Dep. Other Depository Corporations FC  
 Transf. Dep. Other Financial Corporations FC  
 Transf. Dep. Nonresidents FC  
**OTHER DEPOSITS**  
 In National Currency  
 Other Dep. Central Bank NC  
 Other Dep. Other Depository Corporations NC  
 Other Dep. Other Financial Corporations NC  
 Other Dep. Nonresidents NC  
 In Foreign Currency  
 Other Dep. Central Bank FC  
 Other Dep. Other Depository Corporations FC  
 Other Dep. Other Financial Corporations FC  
 Other Dep. Nonresidents FC

**SECURITIES OTHER THAN SHARES**

In National Currency  
 Securities Central Bank NC  
 Securities Other Depository Corporations NC  
 Securities Other Financial Corporations NC  
 Securities Central Government NC  
 Securities State and Local Government NC  
 Securities Public Nonfinancial Corporations NC  
 Securities Other Nonfinancial Corporations NC  
 Securities Other Resident Sectors NC  
 Securities Nonresidents NC  
 In Foreign Currency  
 Securities Central Bank FC  
 Securities Other Depository Corporations FC  
 Securities Other Financial Corporations FC  
 Securities Central Government FC  
 Securities State and Local Government FC  
 Securities Public Nonfinancial Corporations FC  
 Securities Other Nonfinancial Corporations FC  
 Securities Other Resident Sectors FC  
 Securities Nonresidents FC

**LOANS**

In National Currency  
 Loans Central Bank NC  
 Repurchase Agreements Central Bank NC  
 Other Loans to Central Bank NC  
 Loans Other Depository Corporations NC  
 Repurchase Agreements Other Depository Corporations NC  
 Other Loans to Other Depository Corporations NC

**REPORT FORM 4SR FOR OTHER FINANCIAL CORPORATIONS (continued)**

XXX42GDN.R...{Z}  
 XXX42ABN.R...{Z}  
 XXX42BBN.R...{Z}  
 XXX42CBN.R...{Z}  
 XXX42DBN.R...{Z}  
 XXX42HBN.R...{Z}  
 XXX41E.N.R...{Z}  
 XXX41EAN.R...{Z}  
 XXX41EBN.R...{Z}  
 XXX42.BFR...{Z}  
 XXX40E.FR...{Z}  
 XXX40EAFR...{Z}  
 XXX40EBFR...{Z}  
 XXX42EDFR...{Z}  
 XXX42ERFR...{Z}  
 XXX42EJFR...{Z}  
 XXX42GDFR...{Z}  
 XXX42ABFR...{Z}  
 XXX42BBFR...{Z}  
 XXX42CBFR...{Z}  
 XXX42DBFR...{Z}  
 XXX42HBFR...{Z}  
 XXX41E.FR...{Z}  
 XXX41EAFR...{Z}  
 XXX41EBFR...{Z}

**XXX42.C..R...{Z}**  
 XXX42.CN.R...{Z}  
 XXX40F.N.R...{Z}  
 XXX42EEN.R...{Z}  
 XXX42GEN.R...{Z}  
 XXX42ACN.R...{Z}  
 XXX42BCN.R...{Z}  
 XXX42CCN.R...{Z}  
 XXX42DCN.R...{Z}  
 XXX41F.N.R...{Z}  
 XXX42.CFR...{Z}  
 XXX40F.FR...{Z}  
 XXX42EEFR...{Z}  
 XXX42GEFR...{Z}  
 XXX42ACFR...{Z}  
 XXX42BCFR...{Z}  
 XXX42CCFR...{Z}  
 XXX42DCFR...{Z}  
 XXX41F.FR...{Z}

**XXX42.D..R...{Z}**  
 XXX42.DN.R...{Z}  
 XXX42EFN.R...{Z}  
 XXX42GFN.R...{Z}  
 XXX41G.N.R...{Z}  
 XXX42.DFR...{Z}  
 XXX42EFFR...{Z}  
 XXX42GFFR...{Z}  
 XXX41G.FR...{Z}

**ASSETS (continued)**

Loans Other Financial Corporations NC  
 Loans Central Government NC  
 Loans State and Local Government NC  
 Loans Public Nonfinancial Corporations NC  
 Loans Other Nonfinancial Corporations NC  
 Loans Other Resident Sectors NC  
 Loans Nonresidents NC  
 Repurchase Agreements Nonresidents NC  
 Other Loans to Nonresidents NC  
 In Foreign Currency  
 Loans Central Bank FC  
 Repurchase Agreements Central Bank FC  
 Other Loans to Central Bank FC  
 Loans Other Depository Corporations FC  
 Repurchase Agreements Other Depository Corporations FC  
 Other Loans to Other Depository Corporations FC  
 Loans Other Financial Corporations FC  
 Loans Central Government FC  
 Loans State and Local Government FC  
 Loans Public Nonfinancial Corporations FC  
 Loans Other Nonfinancial Corporations FC  
 Loans Other Resident Sectors FC  
 Loans Nonresidents FC  
 Repurchase Agreements Nonresidents FC  
 Other Loans to Nonresidents FC

**SHARES AND OTHER EQUITY**

In National Currency  
 Shares Central Bank NC  
 Shares Other Depository Corporations NC  
 Shares Other Financial Corporations NC  
 Shares Central Government NC  
 Shares State and Local Government NC  
 Shares Public Nonfinancial Corporations NC  
 Shares Other Nonfinancial Corporations NC  
 Shares Nonresidents NC  
 In Foreign Currency  
 Shares Central Bank FC  
 Shares Other Depository Corporations FC  
 Shares Other Financial Corporations FC  
 Shares Central Government FC  
 Shares State and Local Government FC  
 Shares Public Nonfinancial Corporations FC  
 Shares Other Nonfinancial Corporations FC  
 Shares Nonresidents FC

**INSURANCE TECHNICAL RESERVES**

In National Currency  
 Insurance Technical Reserves Other Depository Corporations NC  
 Insurance Technical Reserves Other Financial Corporations NC  
 Insurance Technical Reserves Nonresidents NC  
 In Foreign Currency  
 Insurance Technical Reserves Other Depository Corporations FC  
 Insurance Technical Reserves Other Financial Corporations FC  
 Insurance Technical Reserves Nonresidents FC

**REPORT FORM 4SR FOR OTHER FINANCIAL CORPORATIONS (continued)**

**XXX42.E..R...{Z}**

XXX42.EN.R...{Z}  
 XXX40G.N.R...{Z}  
 XXX42EGN.R...{Z}  
 XXX42GGN.R...{Z}  
 XXX42ADN.R...{Z}  
 XXX42BDN.R...{Z}  
 XXX42CDN.R...{Z}  
 XXX42DDN.R...{Z}  
 XXX42HDN.R...{Z}  
 XXX41H.N.R...{Z}  
 XXX42.EFR...{Z}  
 XXX40G.FR...{Z}  
 XXX42EGFR...{Z}  
 XXX42GGFR...{Z}  
 XXX42ADFR...{Z}  
 XXX42BDFR...{Z}  
 XXX42CDFR...{Z}  
 XXX42DDFR...{Z}  
 XXX42HDFR...{Z}  
 XXX41H.FR...{Z}

**XXX42.F..R...{Z}**

XXX42.G..R...{Z}  
 XXX42.GN.R...{Z}  
 XXX40H.N.R...{Z}  
 XXX42EHN.R...{Z}  
 XXX42GHN.R...{Z}  
 XXX42AEN.R...{Z}  
 XXX42BEN.R...{Z}  
 XXX42CEN.R...{Z}  
 XXX42DEN.R...{Z}  
 XXX42HEN.R...{Z}  
 XXX41I.N.R...{Z}  
 XXX42.GFR...{Z}  
 XXX40H.FR...{Z}  
 XXX42EHFR...{Z}  
 XXX42GHFR...{Z}  
 XXX42AEFR...{Z}  
 XXX42BEFR...{Z}  
 XXX42CEFR...{Z}  
 XXX42DEFR...{Z}  
 XXX42HEFR...{Z}  
 XXX41I.FR...{Z}  
 XXX42.H..R...{Z}  
 XXX43A...R...{Z}  
 XXX43A.N.R...{Z}  
 XXX43AAN.R...{Z}  
 XXX43ABN.R...{Z}  
 XXX40I.N.R...{Z}  
 XXX42EIN.R...{Z}  
 XXX42GIN.R...{Z}  
 XXX42AFN.R...{Z}  
 XXX42BFN.R...{Z}  
 XXX42CFN.R...{Z}

**ASSETS (continued)**

**FINANCIAL DERIVATIVES**

In National Currency  
 Financial Derivatives Central Bank NC  
 Financial Derivatives Other Depository Corporations NC  
 Financial Derivatives Other Financial Corporations NC  
 Financial Derivatives Central Government NC  
 Financial Derivatives State and Local Government NC  
 Financial Derivatives Public Nonfinancial Corporations NC  
 Financial Derivatives Other Nonfinancial Corporations NC  
 Financial Derivatives Other Resident Sectors NC  
 Financial Derivatives Nonresidents NC  
 In Foreign Currency  
 Financial Derivatives Central Bank FC  
 Financial Derivatives Other Depository Corporations FC  
 Financial Derivatives Other Financial Corporations FC  
 Financial Derivatives Central Government FC  
 Financial Derivatives State and Local Government FC  
 Financial Derivatives Public Nonfinancial Corporations FC  
 Financial Derivatives Other Nonfinancial Corporations FC  
 Financial Derivatives Other Resident Sectors FC  
 Financial Derivatives Nonresidents FC

**OTHER ACCOUNTS RECEIVABLE**

**TRADE CREDIT AND ADVANCES**

In National Currency  
 Trade Credit/Advances Central Bank NC  
 Trade Credit/Advances Other Depository Corporations NC  
 Trade Credit/Advances Other Financial Corporations NC  
 Trade Credit/Advances Central Government NC  
 Trade Credit/Advances State and Local Government NC  
 Trade Credit/Advances Public Nonfinancial Corporations NC  
 Trade Credit/Advances Other Nonfinancial Corporations NC  
 Trade Credit/Advances Other Resident Sectors NC  
 Trade Credit/Advances Nonresidents NC  
 In Foreign Currency  
 Trade Credit/Advances Central Bank FC  
 Trade Credit/Advances Other Depository Corporations FC  
 Trade Credit/Advances Other Financial Corporations FC  
 Trade Credit/Advances Central Government FC  
 Trade Credit/Advances State and Local Government FC  
 Trade Credit/Advances Public Nonfinancial Corporations FC  
 Trade Credit/Advances Other Nonfinancial Corporations FC  
 Trade Credit/Advances Other Resident Sectors FC  
 Trade Credit/Advances Nonresidents FC

**OTHER ACCOUNTS RECEIVABLE OTHER**

Other Accounts Receivable Other Resident Sectors  
 In National Currency  
 Dividends Receivable Residents NC  
 Settlement Accounts Residents NC  
 Settlement Accounts Central Bank NC  
 Settlement Accounts Other Depository Corporations NC  
 Settlement Accounts Other Financial Corporations NC  
 Settlement Accounts Central Government NC  
 Settlement Accounts State and Local Government NC  
 Settlement Accounts Public Nonfinancial Corporations NC

**REPORT FORM 4SR FOR OTHER FINANCIAL CORPORATIONS (continued)**

XXX42DFN.R...{Z}	<b>ASSETS (continued)</b>
XXX42HFN.R...{Z}	Settlement Accounts Other Nonfinancial Corporations NC
XXX43ACN.R...{Z}	Settlement Accounts Other Resident Sectors NC
XXX43ADN.R...{Z}	Items in the Process of Collection Residents NC
XXX43A.FR...{Z}	Miscellaneous Asset Items Residents NC
XXX43AAF.R...{Z}	In Foreign Currency
XXX43ABF.R...{Z}	Dividends Receivable Residents FC
XXX40I.FR...{Z}	Settlement Accounts Residents FC
XXX42EIF.R...{Z}	Settlement Accounts Central Bank FC
XXX42GIF.R...{Z}	Settlement Accounts Other Depository Corporations FC
XXX42AFFR...{Z}	Settlement Accounts Other Financial Corporations FC
XXX42BFFR...{Z}	Settlement Accounts Central Government FC
XXX42CFR...{Z}	Settlement Accounts State and Local Government FC
XXX42DFFR...{Z}	Settlement Accounts Public Nonfinancial Corporations FC
XXX42HFFR...{Z}	Settlement Accounts Other Nonfinancial Corporations FC
XXX43ACFR...{Z}	Settlement Accounts Other Resident Sectors FC
XXX43ADFR...{Z}	Items in the Process of Collection Residents FC
XXX41J...R...{Z}	Miscellaneous Asset Items Residents FC
XXX41J.N.R...{Z}	Other Accounts Receivable Other Nonresidents
XXX41JAN.R...{Z}	Other Accounts Receivable Other Nonresidents NC
XXX41JBN.R...{Z}	Dividends Receivable Nonresidents NC
XXX41JCN.R...{Z}	Settlement Accounts Nonresidents NC
XXX41JDN.R...{Z}	Items in the Process of Collection Nonresidents NC
XXX41J.F.R...{Z}	Miscellaneous Asset Items Nonresidents NC
XXX41JAFR...{Z}	Other Accounts Receivable Other Nonresidents FC
XXX41JBFR...{Z}	Dividends Receivable Nonresidents FC
XXX41JCFR...{Z}	Settlement Accounts FC
XXX41JDFR...{Z}	Items in the Process of Collection FC
	Miscellaneous Asset Items Nonresidents FC
<b>XXX43B...R...{Z}</b>	<b>NONFINANCIAL ASSETS</b>
XXX43BA..R...{Z}	Fixed Assets
XXX43BB..R...{Z}	Other Nonfinancial Assets
<b>XXX40RA..R...{Z}</b>	<b>TOTAL ASSETS</b>
	<b>LIABILITIES</b>
XXX46.A..R...{Z}	DEPOSITS EXCLUDED FROM BROAD MONEY
XXX46.F..R...{Z}	TRANSFERABLE DEPOSITS
XXX46.FN.R...{Z}	In National Currency
XXX46GAN.R...{Z}	Transf. Dep. Excl. Central Bank NC
XXX46HAN.R...{Z}	Transf. Dep. Excl. Other Depository Corporations NC
XXX46JBN.R...{Z}	Transf. Dep. Excl. Other Financial Corporations NC
XXX46DAN.R...{Z}	Transf. Dep. Excl. Central Government NC
XXX46BAN.R...{Z}	Transf. Dep. Excl. State and Local Government NC
XXX46BCN.R...{Z}	Transf. Dep. Excl. Public Nonfinancial Corporations NC
XXX46BEN.R...{Z}	Transf. Dep. Excl. Other Nonfinancial Corporations NC
XXX46BGN.R...{Z}	Transf. Dep. Excl. Other Resident Sectors NC
XXX46CAN.R...{Z}	Transf. Dep. Excl. Nonresidents NC
XXX46.FFR...{Z}	In Foreign Currency
XXX46GAFR...{Z}	Transf. Dep. Excl. Central Bank FC
XXX46HAFR...{Z}	Transf. Dep. Excl. Other Depository Corporations FC
XXX46JBFR...{Z}	Transf. Dep. Excl. Other Financial Corporations FC
XXX46DAFR...{Z}	Transf. Dep. Excl. Central Government FC
XXX46BAFR...{Z}	Transf. Dep. Excl. State and Local Government FC



**REPORT FORM 4SR FOR OTHER FINANCIAL CORPORATIONS (continued)**

XXX46BCFR...{Z}  
 XXX46BEFR...{Z}  
 XXX46BGR...{Z}  
 XXX46CAFR...{Z}  
 XXX46.G.R...{Z}  
 XXX46.GN.R...{Z}  
 XXX46GBN.R...{Z}  
 XXX46HBN.R...{Z}  
 XXX46JCN.R...{Z}  
 XXX46DBN.R...{Z}  
 XXX46BBN.R...{Z}  
 XXX46BDN.R...{Z}  
 XXX46BFN.R...{Z}  
 XXX46BHN.R...{Z}  
 XXX46CBN.R...{Z}  
 XXX46.GFR...{Z}  
 XXX46GBFR...{Z}  
 XXX46HBF.R...{Z}  
 XXX46JCF.R...{Z}  
 XXX46DBFR...{Z}  
 XXX46BBFR...{Z}  
 XXX46BDF.R...{Z}  
 XXX46BFFR...{Z}  
 XXX46BHF.R...{Z}  
 XXX46CBFR...{Z}

**XXX46.N.R...{Z}**  
 XXX46.NN.R...{Z}  
 XXX46GCN.R...{Z}  
 XXX46HCN.R...{Z}  
 XXX46JDN.R...{Z}  
 XXX46DCN.R...{Z}  
 XXX46SAN.R...{Z}  
 XXX46SBN.R...{Z}  
 XXX46SCN.R...{Z}  
 XXX46SDN.R...{Z}  
 XXX46CCN.R...{Z}  
 XXX46.NFR...{Z}  
 XXX46GCFR...{Z}  
 XXX46HCFR...{Z}  
 XXX46JDFR...{Z}  
 XXX46DCF.R...{Z}  
 XXX46SAFR...{Z}  
 XXX46SBFR...{Z}  
 XXX46SCFR...{Z}  
 XXX46SDFR...{Z}  
 XXX46CCFR...{Z}

**XXX46.O.R...{Z}**  
 XXX46.ON.R...{Z}  
 XXX46GDN.R...{Z}  
 XXX46GRN.R...{Z}  
 XXX46GSN.R...{Z}  
 XXX46HDN.R...{Z}  
 XXX46HRN.R...{Z}  
 XXX46HSN.R...{Z}

**LIABILITIES (continued)**

Transf. Dep. Excl. Public Nonfinancial Corporations FC  
 Transf. Dep. Excl. Other Nonfinancial Corporations FC  
 Transf. Dep. Excl. Other Resident Sectors FC  
 Transf. Dep. Excl. Nonresidents FC

**OTHER DEPOSITS**

In National Currency  
 Other Dep. Excl. Central Bank NC  
 Other Dep. Excl. Other Depository Corporations NC  
 Other Dep. Excl. Other Financial Corporations NC  
 Other Dep. Excl. Central Government NC  
 Other Dep. Excl. State and Local Government NC  
 Other Dep. Excl. Public Nonfinancial Corporations NC  
 Other Dep. Excl. Other Nonfinancial Corporations NC  
 Other Dep. Excl. Other Resident Sectors NC  
 Other Dep. Excl. Nonresidents NC  
 In Foreign Currency  
 Other Dep. Excl. Central Bank FC  
 Other Dep. Excl. Other Depository Corporations FC  
 Other Dep. Excl. Other Financial Corporations FC  
 Other Dep. Excl. Central Government FC  
 Other Dep. Excl. State and Local Government FC  
 Other Dep. Excl. Public Nonfinancial Corporations FC  
 Other Dep. Excl. Other Nonfinancial Corporations FC  
 Other Dep. Excl. Other Resident Sectors FC  
 Other Dep. Excl. Nonresidents FC

**SECURITIES OTHER THAN SHARES, EXCLUDED FROM BROAD MONEY**

In National Currency  
 Securities Excl. Central Bank NC  
 Securities Excl. Other Depository Corporations NC  
 Securities Excl. Other Financial Corporations NC  
 Securities Excl. Central Government NC  
 Securities Excl. State and Local Government NC  
 Securities Excl. Public Nonfinancial Corporations NC  
 Securities Excl. Other Nonfinancial Corporations NC  
 Securities Excl. Other Resident Sectors NC  
 Securities Excl. Nonresidents NC  
 In Foreign Currency  
 Securities Excl. Central Bank FC  
 Securities Excl. Other Depository Corporations FC  
 Securities Excl. Other Financial Corporations FC  
 Securities Excl. Central Government FC  
 Securities Excl. State and Local Government FC  
 Securities Excl. Public Nonfinancial Corporations FC  
 Securities Excl. Other Nonfinancial Corporations FC  
 Securities Excl. Other Resident Sectors FC  
 Securities Excl. Nonresidents FC

**LOANS**

In National Currency  
 Loans Central Bank NC  
 Repurchase Agreements Central Bank NC  
 Other Loans from Central Bank NC  
 Loans Other Depository Corporations NC  
 Repurchase Agreements Other Depository Corporations NC  
 Other Loans from Other Depository Corporations NC

**REPORT FORM 4SR FOR OTHER FINANCIAL CORPORATIONS (continued)**

XXX46JEN.R...{Z}  
 XXX46DDN.R...{Z}  
 XXX46LAN.R...{Z}  
 XXX46LBN.R...{Z}  
 XXX46LCN.R...{Z}  
 XXX46LDN.R...{Z}  
 XXX46CDN.R...{Z}  
 XXX46CSN.R...{Z}  
 XXX46CVN.R...{Z}  
 XXX46.OFR...{Z}  
 XXX46GDFR...{Z}  
 XXX46GRFR...{Z}  
 XXX46GSFR...{Z}  
 XXX46HDFR...{Z}  
 XXX46HRFR...{Z}  
 XXX46HSFR...{Z}  
 XXX46JEFR...{Z}  
 XXX46DDFR...{Z}  
 XXX46LAFR...{Z}  
 XXX46LBFER...{Z}  
 XXX46LCFR...{Z}  
 XXX46LDFR...{Z}  
 XXX46CDFR...{Z}  
 XXX46CSFR...{Z}  
 XXX46CVFR...{Z}

**XXX46R...R...{Z}**

XXX46R.N.R...{Z}  
 XXX46RGN.R...{Z}  
 XXX46RDN.R...{Z}  
 XXX46CGN.R...{Z}  
 XXX46RHN.R...{Z}  
 XXX46REN.R...{Z}  
 XXX46CHN.R...{Z}  
 XXX46RIN.R...{Z}  
 XXX46GHN.R...{Z}  
 XXX46HHN.R...{Z}  
 XXX46JIN.R...{Z}  
 XXX46DHN.R...{Z}  
 XXX46RAN.R...{Z}  
 XXX46RBN.R...{Z}  
 XXX46RCN.R...{Z}  
 XXX46RFN.R...{Z}  
 XXX46CIN.R...{Z}  
 XXX46R.FR...{Z}  
 XXX46RGFR...{Z}  
 XXX46RDFR...{Z}  
 XXX46CGFR...{Z}  
 XXX46RHFR...{Z}  
 XXX46REFR...{Z}  
 XXX46CHFR...{Z}  
 XXX46RIFR...{Z}  
 XXX46GHFR...{Z}  
 XXX46HHFR...{Z}  
 XXX46JIFR...{Z}

**LIABILITIES (continued)**

Loans Other Financial Corporations NC  
 Loans Central Government NC  
 Loans State and Local Government NC  
 Loans Public Nonfinancial Corporations NC  
 Loans Other Nonfinancial Corporations NC  
 Loans Other Resident Sectors NC  
 Loans Nonresidents NC  
     Repurchase Agreements Nonresidents NC  
     Other Loans from Nonresidents NC  
 In Foreign Currency  
     Loans Central Bank FC  
         Repurchase Agreements Central Bank FC  
         Other Loans from Central Bank FC  
     Loans Other Depository Corporations FC  
         Repurchase Agreements Other Depository Corporations FC  
         Other Loans from Other Depository Corporations FC  
     Loans Other Financial Corporations FC  
     Loans Central Government FC  
     Loans State and Local Government FC  
     Loans Public Nonfinancial Corporations FC  
     Loans Other Nonfinancial Corporations FC  
     Loans Other Resident Sectors FC  
     Loans Nonresidents FC  
         Repurchase Agreements Nonresidents FC  
         Other Loans from Nonresidents FC

**INSURANCE TECHNICAL RESERVES**

In National Currency  
     Net Equity of Households in Life Insurance Reserves NC  
         Net Equity of Households in Life Insurance Reserves Residents NC  
         Net Equity of Households in Life Insurance Reserves Nonresidents NC  
     Net Equity of Households in Pension Funds NC  
         Net Equity of Households in Pension Funds Residents NC  
         Net Equity of Households in Pension Funds Nonresidents NC  
     Prepayment of Premiums and Reserves Against Outstanding Claims NC  
         Prep.Premiums/Res.Claims Central Bank NC  
         Prep.Premiums/Res.Claims Other Depository Corporations NC  
         Prep.Premiums/Res.Claims Other Financial Corporations NC  
         Prep.Premiums/Res.Claims Central Government NC  
         Prep.Premiums/Res.Claims State and Local Government NC  
         Prep.Premiums/Res.Claims Public Nonfinancial Corporations NC  
         Prep.Premiums/Res.Claims Other Nonfinancial Corporations NC  
         Prep.Premiums/Res.Claims Other Resident Sectors NC  
         Prep.Premiums/Res.Claims Nonresidents NC  
 In Foreign Currency  
     Net Equity of Households in Life Insurance Reserves FC  
         Net Equity of Households in Life Insurance Reserves Residents FC  
         Net Equity of Households in Life Insurance Reserves Nonresidents FC  
     Net Equity of Households in Pension Funds FC  
         Net Equity of Households in Pension Funds Residents FC  
         Net Equity of Households in Pension Funds Nonresidents FC  
     Prepayment of Premiums and Reserves Against Outstanding Claims FC  
         Prep.Premiums/Res.Claims Central Bank FC  
         Prep.Premiums/Res.Claims Other Depository Corporations FC  
         Prep.Premiums/Res.Claims Other Financial Corporations FC

**REPORT FORM 4SR FOR OTHER FINANCIAL CORPORATIONS (continued)**

XXX46DHF.R...{Z}  
 XXX46RAFR...{Z}  
 XXX46RBF.R...{Z}  
 XXX46RCFR...{Z}  
 XXX46RFFR...{Z}  
 XXX46CIFR...{Z}

**XXX46.P.R...{Z}**

XXX46.PN.R...{Z}  
 XXX46GEN.R...{Z}  
 XXX46HEN.R...{Z}  
 XXX46JFN.R...{Z}  
 XXX46DEN.R...{Z}  
 XXX46MAN.R...{Z}  
 XXX46MBN.R...{Z}  
 XXX46MCN.R...{Z}  
 XXX46MDN.R...{Z}  
 XXX46CEN.R...{Z}  
 XXX46.PFR...{Z}  
 XXX46GEFR...{Z}  
 XXX46HEFR...{Z}  
 XXX46JFFR...{Z}  
 XXX46DEF.R...{Z}  
 XXX46MAFR...{Z}  
 XXX46MBFR...{Z}  
 XXX46MCFR...{Z}  
 XXX46MDFR...{Z}  
 XXX46CEFR...{Z}

**XXX47....R...{Z}**

XXX46.Q.R...{Z}  
 XXX46.QN.R...{Z}  
 XXX46GFN.R...{Z}  
 XXX46HFN.R...{Z}  
 XXX46GN.R...{Z}  
 XXX46DFN.R...{Z}  
 XXX46NAN.R...{Z}  
 XXX46NBN.R...{Z}  
 XXX46NCN.R...{Z}  
 XXX46NDN.R...{Z}  
 XXX46CFN.R...{Z}  
 XXX46.QFR...{Z}  
 XXX46GFFR...{Z}  
 XXX46HFFR...{Z}  
 XXX46JGFR...{Z}  
 XXX46DFFR...{Z}  
 XXX46NAFR...{Z}  
 XXX46NBF.R...{Z}  
 XXX46NCFR...{Z}  
 XXX46NDFR...{Z}  
 XXX46CFFR...{Z}  
 XXX46.R.R...{Z}  
 XXX47P..R...{Z}  
 XXX47PA..R...{Z}  
 XXX47PB..R...{Z}

**LIABILITIES (continued)**

Prep.Premiums/Res.Claims Central Government FC  
 Prep.Premiums/Res.Claims State and Local Government FC  
 Prep.Premiums/Res.Claims Public Nonfinancial Corporations FC  
 Prep.Premiums/Res.Claims Other Nonfinancial Corporations FC  
 Prep.Premiums/Res.Claims Other Resident Sectors FC  
 Prep.Premiums/Res.Claims Nonresidents FC

**FINANCIAL DERIVATIVES**

In National Currency  
 Financial Derivatives Central Bank NC  
 Financial Derivatives Other Depository Corporations NC  
 Financial Derivatives Other Financial Corporations NC  
 Financial Derivatives Central Government NC  
 Financial Derivatives State and Local Government NC  
 Financial Derivatives Public Nonfinancial Corporations NC  
 Financial Derivatives Other Nonfinancial Corporations NC  
 Financial Derivatives Other Resident Sectors NC  
 Financial Derivatives Nonresidents NC  
 In Foreign Currency  
 Financial Derivatives Central Bank FC  
 Financial Derivatives Other Depository Corporations FC  
 Financial Derivatives Other Financial Corporations FC  
 Financial Derivatives Central Government FC  
 Financial Derivatives State and Local Government FC  
 Financial Derivatives Public Nonfinancial Corporations FC  
 Financial Derivatives Other Nonfinancial Corporations FC  
 Financial Derivatives Other Resident Sectors FC  
 Financial Derivatives Nonresidents FC

**OTHER ACCOUNTS PAYABLE**

**TRADE CREDIT AND ADVANCES**

In National Currency  
 Trade Credit/Advances Central Bank NC  
 Trade Credit/Advances Other Depository Corporations NC  
 Trade Credit/Advances Other Financial Corporations NC  
 Trade Credit/Advances Central Government NC  
 Trade Credit/Advances State and Local Government NC  
 Trade Credit/Advances Public Nonfinancial Corporations NC  
 Trade Credit/Advances Other Nonfinancial Corporations NC  
 Trade Credit/Advances Other Resident Sectors NC  
 Trade Credit/Advances Nonresidents NC

In Foreign Currency

Trade Credit/Advances Central Bank FC  
 Trade Credit/Advances Other Depository Corporations FC  
 Trade Credit/Advances Other Financial Corporations FC  
 Trade Credit/Advances Central Government FC  
 Trade Credit/Advances State and Local Government FC  
 Trade Credit/Advances Public Nonfinancial Corporations FC  
 Trade Credit/Advances Other Nonfinancial Corporations FC  
 Trade Credit/Advances Other Resident Sectors FC  
 Trade Credit/Advances Nonresidents FC

**OTHER ACCOUNTS PAYABLE OTHER**

Provisions for Losses  
 Provisions for Loan Losses  
 Provisions for Other Losses

**REPORT FORM 4SR FOR OTHER FINANCIAL CORPORATIONS (continued)**

XXX47D...R...{Z}	<b>LIABILITIES (continued)</b>
XXX47I...R...{Z}	Accumulated Depreciation
XXX47B...R...{Z}	Consolidation Adjustment for Headquarter and Branches
XXX47B.N.R...{Z}	Other Accounts Payable Other Resident Sectors
XXX47BAN.R...{Z}	Other Accounts Payable Other Resident Sectors NC
XXX47BBN.R...{Z}	Dividends Payable Residents NC
XXX46GGN.R...{Z}	Settlement Accounts Residents NC
XXX46HGN.R...{Z}	Settlement Accounts Central Bank NC
XXX46JHN.R...{Z}	Settlement Accounts Other Depository Corporations NC
XXX46DGN.R...{Z}	Settlement Accounts Other Financial Corporations NC
XXX46OAN.R...{Z}	Settlement Accounts Central Government NC
XXX46OBN.R...{Z}	Settlement Accounts State and Local Government NC
XXX46OCN.R...{Z}	Settlement Accounts Public Nonfinancial Corporations NC
XXX46ODN.R...{Z}	Settlement Accounts Other Nonfinancial Corporations NC
XXX47BCN.R...{Z}	Settlement Accounts Other Resident Sectors NC
XXX47B.FR...{Z}	Miscellaneous Liability Items Residents NC
XXX47BAFR...{Z}	Other Accounts Payable Other Resident Sectors FC
XXX47BBFR...{Z}	Dividends Payable Residents FC
XXX46GGFR...{Z}	Settlement Accounts Residents FC
XXX46HGFR...{Z}	Settlement Accounts Central Bank FC
XXX46JHFR...{Z}	Settlement Accounts Other Depository Corporations FC
XXX46DGFR...{Z}	Settlement Accounts Other Financial Corporations FC
XXX46OAFR...{Z}	Settlement Accounts Central Government FC
XXX46OBFR...{Z}	Settlement Accounts State and Local Government FC
XXX46OCFR...{Z}	Settlement Accounts Public Nonfinancial Corporations FC
XXX46ODFR...{Z}	Settlement Accounts Other Nonfinancial Corporations FC
XXX47BCFR...{Z}	Settlement Accounts Other Resident Sectors FC
XXX46CJ..R...{Z}	Miscellaneous Liability Items Residents FC
XXX46CJN.R...{Z}	Other Accounts Payable Other Nonresidents
XXX46CKN.R...{Z}	Other Accounts Payable Other Nonresidents NC
XXX46CLN.R...{Z}	Dividends Payable Nonresidents NC
XXX46CMN.R...{Z}	Settlement Accounts Nonresidents NC
XXX46CJFR...{Z}	Miscellaneous Liability Items Nonresidents NC
XXX46CKFR...{Z}	Other Accounts Payable Other Nonresidents FC
XXX46CLFR...{Z}	Dividends Payable Nonresidents FC
XXX46CMFR...{Z}	Settlement Accounts Nonresidents FC
	Miscellaneous Liability Items Nonresidents FC
<b>XXX47A...R...{Z}</b>	<b>SHARES AND OTHER EQUITY</b>
XXX47AA..R...{Z}	Funds Contributed by Owners
XXX47AAN.R...{Z}	Funds Contributed by Owners NC
XXX47AAF.R...{Z}	Funds Contributed by Owners FC
XXX47AB..R...{Z}	Retained Earnings
XXX47AC..R...{Z}	Current Year Result
XXX47AD..R...{Z}	General and Special Reserves
XXX47RV..R...{Z}	Valuation Adjustment
<b>XXX40RL..R...{Z}</b>	<b>TOTAL LIABILITIES</b>
XXX40R.V.R...{Z}	Vertical Check

**REPORT FORM 4SR FOR OTHER FINANCIAL CORPORATIONS (continued)**

**MEMORANDUM ITEMS**

XXX40EX..R...{Z} End of Period Exchange Rate

**ASSETS**

XXX43KA..R...{Z} ACCRUED INTEREST ON LOANS

XXX43KB..R...{Z} ARREARS ON LOANS (PRINCIPAL AND INTEREST)

XXX43KC..R...{Z} EXPECTED LOSSES ON LOANS  
 XXX43KCA.R...{Z} Other Depository Corporations  
 XXX43KCB.R...{Z} Other Financial Corporations  
 XXX43KCC.R...{Z} Central Government  
 XXX43KCD.R...{Z} State and Local Government  
 XXX43KCE.R...{Z} Public Nonfinancial Corporations  
 XXX43KCF.R...{Z} Other Nonfinancial Corporations  
 XXX43KCG.R...{Z} Other Resident Sectors  
 XXX43KCH.R...{Z} Nonresidents

XXX43KD..R...{Z} ACCRUED INTEREST ON SECURITIES OTHER THAN SHARES

XXX43L...R...{Z} CLAIMS ON OTHER DEPOSITORY CORPORATIONS IN LIQUIDATION  
 XXX43LA..R...{Z} TRANSFERABLE DEPOSITS

XXX43LAN.R...{Z} Transf. Dep. Other Depository Corporations In Liquidation NC  
 XXX43LAF.R...{Z} Transf. Dep. Other Depository Corporations In Liquidation FC

XXX43LB..R...{Z} OTHER DEPOSITS  
 XXX43LBN.R...{Z} Other Dep. Other Depository Corporations In Liquidation NC  
 XXX43LBF.R...{Z} Other Dep. Other Depository Corporations In Liquidation FC

XXX43LC..R...{Z} SECURITIES OTHER THAN SHARES  
 XXX43LCN.R...{Z} Securities Other Depository Corporations In Liquidation NC  
 XXX43LCF.R...{Z} Securities Other Depository Corporations In Liquidation FC

XXX43LD..R...{Z} LOANS  
 XXX43LDN.R...{Z} Loans Other Depository Corporations In Liquidation NC  
 XXX43LDF.R...{Z} Loans Other Depository Corporations In Liquidation FC

XXX43LE..R...{Z} SHARES AND OTHER EQUITY

XXX43LF..R...{Z} FINANCIAL DERIVATIVES  
 XXX43LFN.R...{Z} Financial Derivatives Other Depository Corporations In Liquidation NC  
 XXX43LFF.R...{Z} Financial Derivatives Other Depository Corporations In Liquidation FC

XXX43LG..R...{Z} OTHER ACCOUNTS RECEIVABLE  
 XXX43LGN.R...{Z} Other Accounts Rec. Other Depository Corporations In Liquidation NC  
 XXX43LGF.R...{Z} Other Accounts Rec. Other Depository Corporations In Liquidation FC

XXX43M...R...{Z} CLAIMS ON OTHER FINANCIAL CORPORATIONS IN LIQUIDATION  
 XXX43MA..R...{Z} TRANSFERABLE DEPOSITS

XXX43MAN.R...{Z} Transf. Dep. Other Financial Corporations In Liquidation NC  
 XXX43MAF.R...{Z} Transf. Dep. Other Financial Corporations In Liquidation FC

XXX43MB..R...{Z} OTHER DEPOSITS  
 XXX43MBN.R...{Z} Other Dep. Other Financial Corporations In Liquidation NC  
 XXX43MBF.R...{Z} Other Dep. Other Financial Corporations In Liquidation FC

XXX43MC..R...{Z} SECURITIES OTHER THAN SHARES  
 XXX43MCN.R...{Z} Securities Other Financial Corporations In Liquidation NC  
 XXX43MCF.R...{Z} Securities Other Financial Corporations In Liquidation FC

XXX43MD..R...{Z} LOANS  
 XXX43MDN.R...{Z} Loans Other Financial Corporations In Liquidation NC  
 XXX43MDF.R...{Z} Loans Other Financial Corporations In Liquidation FC

**REPORT FORM 4SR FOR OTHER FINANCIAL CORPORATIONS (continued)**

XXX43ME..R...{Z}	<b>MEMORANDUM ITEMS</b> (continued)
XXX43MF..R...{Z}	SHARES AND OTHER EQUITY
XXX43MFN.R...{Z}	FINANCIAL DERIVATIVES
XXX43MFF.R...{Z}	Financial Derivatives Other Financial Corporations In Liquidation NC
XXX43MG..R...{Z}	Financial Derivatives Other Financial Corporations In Liquidation FC
XXX43MGN.R...{Z}	OTHER ACCOUNTS RECEIVABLE
XXX43MGFR...{Z}	Other Accounts Rec. Other Financial Corporations In Liquidation NC
	Other Accounts Rec. Other Financial Corporations In Liquidation FC
	<b>LIABILITIES</b>
XXX47KA..R...{Z}	ACCRUED INTEREST ON LOANS
XXX47KB..R...{Z}	ARREARS ON LOANS (PRINCIPAL AND INTEREST)
XXX47KC..R...{Z}	ACCRUED INTEREST ON SECURITIES OTHER THAN SHARES
XXX47AM..R...{Z}	SHARES AND OTHER EQUITY: MARKET VALUE, BY HOLDING SECTOR
XXX47AMA.R...{Z}	Other Depository Corporations
XXX47AMB.R...{Z}	Other Financial Corporations
XXX47AMC.R...{Z}	Central Government
XXX47AMD.R...{Z}	State and Local Government
XXX47AME.R...{Z}	Public Nonfinancial Corporations
XXX47AMF.R...{Z}	Other Nonfinancial Corporations
XXX47AMG.R...{Z}	Other Resident Sectors
XXX47AMH.R...{Z}	Nonresidents
XXX47L...R...{Z}	LIABILITIES TO OTHER DEPOSITORY CORPORATIONS IN LIQUIDATION
XXX47LA..R...{Z}	TRANSFERABLE DEPOSITS EXCLUDED FROM BROAD MONEY
XXX47LAN.R...{Z}	Transf. Dep. Excl. Other Depository Corporations In Liquidation NC
XXX47LAF.R...{Z}	Transf. Dep. Excl. Other Depository Corporations In Liquidation FC
XXX47LB..R...{Z}	OTHER DEPOSITS EXCLUDED FROM BROAD MONEY
XXX47LBN.R...{Z}	Other Dep. Excl. Other Depository Corporations In Liquidation NC
XXX47LBF.R...{Z}	Other Dep. Excl. Other Depository Corporations In Liquidation FC
XXX47LC..R...{Z}	SECURITIES OTHER THAN SHARES, EXCLUDED FROM BROAD MONEY
XXX47LCN.R...{Z}	Securities Excl. Other Depository Corporations In Liquidation NC
XXX47LCF.R...{Z}	Securities Excl. Other Depository Corporations In Liquidation FC
XXX47LD..R...{Z}	LOANS
XXX47LDN.R...{Z}	Loans Other Depository Corporations In Liquidation NC
XXX47LDF.R...{Z}	Loans Other Depository Corporations In Liquidation FC
XXX47LE..R...{Z}	FINANCIAL DERIVATIVES
XXX47LEN.R...{Z}	Financial Derivatives Other Depository Corporations In Liquidation NC
XXX47LEF.R...{Z}	Financial Derivatives Other Depository Corporations In Liquidation FC
XXX47LF..R...{Z}	OTHER ACCOUNTS PAYABLE
XXX47LFN.R...{Z}	Other Accounts Pay. Other Depository Corporations In Liquidation NC
XXX47LFF.R...{Z}	Other Accounts Pay. Other Depository Corporations In Liquidation FC
XXX47M...R...{Z}	LIABILITIES TO OTHER FINANCIAL CORPORATIONS IN LIQUIDATION
XXX47MA..R...{Z}	TRANSFERABLE DEPOSITS EXCLUDED FROM BROAD MONEY
XXX47MAN.R...{Z}	Transf. Dep. Excl. Other Financial Corporations In Liquidation NC
XXX47MAF.R...{Z}	Transf. Dep. Excl. Other Financial Corporations In Liquidation FC
XXX47MB..R...{Z}	OTHER DEPOSITS EXCLUDED FROM BROAD MONEY
XXX47MBN.R...{Z}	Other Dep. Excl. Other Financial Corporations In Liquidation NC
XXX47MBF.R...{Z}	Other Dep. Excl. Other Financial Corporations In Liquidation FC
XXX47MC..R...{Z}	SECURITIES OTHER THAN SHARES, EXCLUDED FROM BROAD MONEY
XXX47MCN.R...{Z}	Securities Excl. Other Financial Corporations In Liquidation NC
XXX47MCF.R...{Z}	Securities Excl. Other Financial Corporations In Liquidation FC

**REPORT FORM 4SR FOR OTHER FINANCIAL CORPORATIONS (concluded)**

XXX47MD..R...{Z}  
 XXX47MDN.R...{Z}  
 XXX47MDFR...{Z}  
 XXX47ME..R...{Z}  
 XXX47MEN.R...{Z}  
 XXX47MEFR...{Z}  
 XXX47MF.R...{Z}  
 XXX47MFN.R...{Z}  
 XXX47MFFR...{Z}

**MEMORANDUM ITEMS (continued)**

LOANS  
     Loans Other Financial Corporations In Liquidation NC  
     Loans Other Financial Corporations In Liquidation FC  
 FINANCIAL DERIVATIVES  
     Financial Derivatives Other Financial Corporations In Liquidation NC  
     Financial Derivatives Other Financial Corporations In Liquidation FC  
 OTHER ACCOUNTS PAYABLE  
     Other Accounts Pay. Other Financial Corporations In Liquidation NC  
     Other Accounts Pay. Other Financial Corporations In Liquidation FC

**REPORT FORM 5SR FOR MONETARY AGGREGATES**

**XXX59M...R...{Z}**  
 XXX59MA..R...{Z}  
 XXX59MB..R...{Z}  
 XXX59MC..R...{Z}  
 XXX59MD..R...{Z}  
 XXX59ME..R...{Z}  
 XXX59MF..R...{Z}

**XXX59M.C.R...{Z}**

**BROAD MONEY**  
 Currency in Circulation Outside Depository Corporations  
 Currency Issued by Central Government  
 Deposits in Depository Corporations  
 Deposits in Nonfinancial Corporations (Including Electronic Money)  
 Securities Issued by Depository Corporations  
 Securities Issued by Central Government

**BROAD MONEY SEASONALLY ADJUSTED**

**MONETARY AGGREGATES**

# References

- Bank for International Settlements, Commonwealth Secretariat, Eurostat, International Monetary Fund, Organization for Economic Cooperation and Development, Paris Club Secretariat, United Nations Conference on Trade and Development, and World Bank, 2003, *External Debt Statistics: Guide for Compilers and Users* (Washington). Available via the Internet: <http://www.imf.org/external/pubs/ft/eds/Eng/Guide/index.htm>.
- Bank of England, 2004, *A Statistical Code of Practice for the Bank of England* (London). Available via the Internet: <http://www.bankofengland.co.uk/statistics/about/code.htm>.
- , 2006, *Handbooks in Central Banking No. 25: Monetary and Financial Statistics* (London). Available via the Internet: <http://www.bankofengland.co.uk/education/CCBS/handbooks/pdf/ccbs25.pdf>.
- Barnett, William A., 1980, "Economic Monetary Aggregates: An Application of Index Number and Aggregation Theory," *Journal of Econometrics*, Vol. 14 (Summer), pp. 11–48.
- , Douglas Fisher, and Apostolos Serletis, 1992, "Consumer Theory and the Demand for Money," *Journal of Economic Literature*, Vol. 30 (December), pp. 2086–2119.
- Barnett, William A., Edward K. Offenbacher, and Paul A. Spindt, 1984, "The New Divisia Monetary Aggregates," *Journal of Political Economy*, Vol. 92, No. 6 (December), pp. 1049–85.
- Black, Fischer, 1976, "The Pricing of Commodity Contracts," *Journal of Financial Economics*, Vol. 3 (January–March), pp. 167–79.
- , and Myron Scholes, 1973, "The Pricing of Options and Corporate Liabilities," *Journal of Political Economy*, Vol. 81 (May–June), pp. 637–54.
- Bloem, Adriaan M., Robert J. Dippelsman, and Nils O. Maehle, 2001, *Quarterly National Accounts Manual: Concepts, Data Sources, and Compilation* (Washington, International Monetary Fund). Available via the Internet: <http://www.imf.org/external/pubs/ft/qna/2000/Textbook/index.htm>.
- Board of Governors of the Federal Reserve System, 2000, *Guide to the Flow of Funds Accounts*, Vols. 1 and 2 (Washington).
- Bodie, Zvi, Alex Kane, and Alan J. Marcus, 2002, *Investments* (Boston: McGraw-Hill Irwin, 5th ed.).
- Box, George E. P., and G. M. Jenkins, 1976, *Time Series Analysis: Forecasting and Control* (San Francisco: Holden-Day, rev. ed.).
- , and G. C. Reinsel, 1994, *Time Series Analysis: Forecasting and Control*, 3rd ed. (Upper Saddle River, New Jersey: Prentice-Hall).
- Box, George E. P., and G. C. Tiao, 1975, "Intervention Analysis with Applications to Economic and Environmental Problems," *Journal of the American Statistical Association*, Vol. 70 (March), pp. 70–79.
- Bureau of the Census, U.S. Department of Commerce, 2007, *X-12-ARIMA Reference Manual*, Version 0.3 (Washington). Available via the Internet: [http://www.census.gov/srd/www/x12a/x12down\\_pc.html#x12doc](http://www.census.gov/srd/www/x12a/x12down_pc.html#x12doc). The X-12-ARIMA program also is available via the Internet: [http://www.census.gov/srd/www/x12a/x12down\\_pc.html](http://www.census.gov/srd/www/x12a/x12down_pc.html).
- Burnett, Mhairi, 2006, "Seasonal Adjustment of UK Monetary Aggregates: Direct versus Indirect Approach," *Monetary and Financial Statistics* (February), pp. 1–3. Available via the Internet: <http://www.bankofengland.co.uk/statistics/ms/articles/art1feb06.pdf>.
- Chance, Don M., 2004, *An Introduction to Derivatives and Risk Management* (Mason, Ohio: Thomson/South-Western, 6th ed.).
- Commission of the European Communities, International Monetary Fund, Organization for Economic Cooperation and Development, United Nations, and World Bank, 1993, *System of National Accounts 1993* (Brussels/Luxembourg, New York, Paris, and Washington). Available via the Internet: <http://unstats.un.org/unsd/sna1993/toctop.asp>. [Updates and changes to paragraphs, if approved by the Statistical Commission, have been incorporated.]
- , 2004, *Updates and Amendments to the System of National Accounts 1993* (Washington).
- Cox, J. C., S. A. Ross, and M. Rubinstein, 1979, "Option Pricing: A Simplified Approach," *Journal of Financial Economics*, Vol. 7 (September), pp. 229–63.
- Dagum, E. B., 1988, *X-11-ARIMA/88 Seasonal Adjustment Method—Foundations and Users' Manual* (Ottawa: Statistics Canada).
- European Central Bank, 2000a, "Issues Arising from the Emergence of Electronic Money," *ECB Monthly Bulletin* (November), pp. 49–60.



- , 2000b, *Seasonal Adjustment of Monetary Aggregates and HICP for the Euro Area* (Frankfurt am Main).
- , 2006a, *Handbook for the Compilation of Flows Statistics on the MFI Balance Sheet* (Frankfurt am Main). Available via the Internet: <http://www.ecb.int/pub/pdf/other/handbookcompilationflowstatisticsmfibalance200602en.pdf>.
- , 2006b, *Methodological Notes for the Compilation of the Revaluation Adjustment* (Frankfurt am Main). Available via the Internet: <http://www.ecb.int/pub/pdf/other/methodologicalnotescompilationrevaluation200602en.pdf>.
- European Communities, 1998, Council Regulation (EC) No. 2533/98 (November 27, 1998); in *Official Journal of the European Communities* (November).
- European Parliament, 2000, Council Directive 2000/46/EC (Brussels).
- Eurostat, 1996, *European System of Accounts: ESA 1995* (Luxembourg: Office for Official Publications of the European Communities).
- Fisher, P., S. Hudson, and M. Pradhan, 1993, "Divisia Measures of Money," *Bank of England Quarterly Bulletin* (May), pp. 240–55.
- Garman, M. B., and S. W. Kohlhagen, 1983, "Foreign Currency Option Values," *Journal of International Money and Finance*, Vol. 2 (December), pp. 231–37.
- Gómez, V., and A. Maravall, 1996, "Programs TRAMO and SEATS, Instructions for the User (with Some Updates)," Research Department Working Paper 9628 (Madrid: Bank of Spain).
- Hancock, Matthew, 2005a, "A New Measure of Divisia Money," *Monetary and Financial Statistics* (January), pp. 13–14. Available via the Internet: <http://www.bankofengland.co.uk/statistics/ms/articles/art2jan05.pdf>.
- , 2005b, "Divisia Money," *Bank of England Quarterly Bulletin* (Spring), pp. 39–46. Available via the Internet: <http://www.bankofengland.co.uk/publications/quarterlybulletin/qb050103.pdf>.
- Hillmer, S. C., and G. C. Tiao, 1982, "An ARIMA-Model-Based Approach to Seasonal Adjustment," *Journal of the American Statistical Association*, Vol. 77 (March), pp. 63–70.
- Holder, Andrew, 2005, "Cost Benefit Analysis Workshop, 14–15 July 2005," *Monetary and Financial Statistics* (September), pp. 1–3. Available via the Internet: <http://www.bankofengland.co.uk/statistics/ms/articles/art1sep05.pdf>.
- , 2006, "Cost-Benefit Analysis of Monetary and Financial Statistics," *Bank of England Quarterly Bulletin* (Summer), pp. 161–69. Available via the Internet: <http://www.bankofengland.co.uk/publications/quarterlybulletin/qb060203.pdf>.
- Hull, John C., 2003, *Options, Futures, and Other Derivatives* (Upper Saddle River, New Jersey: Prentice-Hall, 5th ed.).
- International Accounting Standards Board, 2005a, *International Financial Reporting Standards* (London, June). Available via the Internet (paid subscription): <http://www.iasb.co.uk>.
- , 2005b, *The Fair Value Option, IAS 39 Financial Instruments: Recognition and Measurement* (London, June).
- International Labour Office, International Monetary Fund, Organization for Economic Cooperation and Development, Statistical Office of the European Communities (Eurostat), United Nations Economic Commission for Europe and World Bank, 2004, *Consumer Price Index Manual: Theory and Practice* (Geneva: International Labour Office). Available via the Internet: <http://www.ilo.org/public/english/bureau/stat/guides/cpi/index.htm#manual>.
- International Labour Organization, International Monetary Fund, Organization for Economic Cooperation and Development, United Nations Economic Commission for Europe, and World Bank, 2004, *Producer Price Index Manual: Theory and Practice* (Washington: International Monetary Fund). Available via the Internet: <http://www.imf.org/external/np/sta/teggpi/index.htm>.
- International Monetary Fund, 1993, *Balance of Payments Manual* (Washington, 5th ed.). Available via the Internet: <http://www.imf.org/external/np/sta/bop/bopman.pdf>.
- , 1995, *Balance of Payments Compilation Guide* (Washington). Available via the Internet: <http://www.imf.org/external/pubs/ft/bopcg/1995/bopcg.pdf>.
- , 1996, *Balance of Payments Textbook* (Washington). Available via the Internet: <http://www.imf.org/external/np/sta/bop/boptex.pdf>.
- , 2000a, *Financial Derivatives: A Supplement to the Fifth Edition (1993) of the Balance of Payments Manual* (Washington). Available via the Internet: <http://www.imf.org/external/pubs/ft/fd/2000/index.htm>.
- , 2000b, *Monetary and Financial Statistics Manual* (Washington). Available via the Internet: <http://www.imf.org/external/pubs/ft/mfs/manual/index.htm>.
- , 2001, *Government Finance Statistics Manual 2001* (Washington). Available via the Internet: <http://www.imf.org/external/pubs/ft/gfs/manual/pdf/all.pdf>.
- , 2002, *Coordinated Portfolio Investment Survey Guide* (Washington, 2nd ed.). Available via the Internet: <http://www.imf.org/external/pubs/ft/cpis/2002/index.htm>.
- , 2006, *Financial Soundness Indicators: Compilation Guide* (Washington). Available via the Internet: <http://www.imf.org/external/pubs/ft/fsi/guide/2006/index.htm>.
- , 2007a, *The Special Data Dissemination Standard: Guide for Subscribers and Users* (Washington).

- , 2007b, *The General Data Dissemination System: Guide for Participants and Users* (Washington).
- , Draft, *Export and Import Price Index Manual* (Washington). Available via the Internet: <http://www.imf.org/external/np/sta/tegeipi/index.htm>.
- , and Organization for Economic Cooperation and Development, 2003, *Foreign Direct Investment Statistics: How Countries Measure FDI 2001* (Washington). Available via the Internet: <http://www.imf.org/external/pubs/ft/fdis/2003/index.htm>.
- Janssen, Norbert, 1996, "The Demand for Divisia Money by the Personal Sector and by Industrial and Commercial Companies," *Bank of England Quarterly Bulletin* (November), pp. 405–11. Available via the Internet: <http://www.bankofengland.co.uk/publications/quarterlybulletin/qb960405.pdf>.
- Kester, Anne Y., 2001, *International Reserves and Foreign Currency Liquidity: Guidelines for a Data Template* (Washington: International Monetary Fund). Available via the Internet: <http://dsbb.imf.org/Applications/web/sddsguide/>.
- Krueger, Russell, and Jiming Ha, 1995, "Measurement of Co-Circulation of Currencies," IMF Working Paper 95/34 (March).
- Manna, Michele, and Romana Peronaci, eds., 2003, *Seasonal Adjustment* (Frankfurt am Main: European Central Bank).
- Maurin, Laurent, 2003, "Criteria to Determine the Optimal Revision Policy: A Case Study Based on Euro Zone Monetary Aggregates Data," in European Central Bank, *Seasonal Adjustment* (Frankfurt am Main), pp. 67–84.
- Merton, Robert C., 1973, "Theory of Rational Option Pricing," *Bell Journal of Economics and Management Science*, Vol. 4 (Spring), pp. 141–83; reprinted in Robert C. Merton, 1990, *Continuous-Time Finance* (Malden, Massachusetts: Blackwell), Chapter 8.
- Saunders, Anthony, and Marcia Million Cornett, 2003, *Financial Institutions Management: A Risk Management Approach* (New York: McGraw-Hill, 4th ed.).
- Shiskin, Julius, Allan H. Young, and John C. Musgrave, 1967, "The X-11 Variant of the Census Method II Seasonal Adjustment Program," Technical Paper No. 15 (Washington: Bureau of the Census). Available via the Internet: <http://www.census.gov/ts/papers/ShiskinYoungMusgrave1967.pdf>.
- Thorp, John, 2003, "Change in Seasonal Adjustment Method to X-12-ARIMA," *Monetary and Financial Statistics* (December), pp. 4–8. Available via Internet: <http://www.bankofengland.co.uk/statistics/ms/articles/artdec03.pdf>.
- Vanderhoof, Irwin T., and Edward I. Altman, 2000, *The Fair Value of Insurance Business* (Boston: Kluwer Academic).

# Index

Numbers in references refer to paragraphs.

- Above-the-line components, 8.101
- Absolute movement rules, 2.118
- Acceptances, 4.33
- Accounting and Reporting by Retirement Benefit Plans*, 2.16
- Accounting for Government Grants and Disclosure of Government Assistance*, 2.15
- Accounting rules
  - bid and asked prices, 5.322–5.324
  - data netting, 5.325–5.330
  - financial service fees, 5.320–5.321
  - hedge accounting, 5.331–5.337
  - offsetting, 5.327–5.330
  - settlement date accounting, 5.300–5.309, 5.349–5.359
  - time of recording, 5.300–5.309
  - trade date accounting, 5.300–5.309, 5.349–5.359
  - transaction costs, 5.310–5.319
  - transactions estimation, 5.338–5.348
  - valuation change estimation, 5.338–5.348
- Accounting standards, 2.3
- Accounts
  - effect of debits and credits, 2.75–2.79, Box 2.4
- Accrual basis accounting, 2.27–2.31, 8.78
- Accrual principle, 2.22
- Accrued expenses, 4.117
- Accrued interest
  - accounting for, 2.80, Box 2.5
  - calculations, 5.92–5.108
  - life insurance corporations, 2.122, Annex 2.1
  - other depository corporations, 2.119–2.120, Annex 2.1
  - other financial intermediaries, 2.121
  - principle of, 2.28–2.30, reporting, 5.109–5.112
  - in sectoral balance sheet, 7.32
  - for transactions, 5.13
- Accrued taxes, 4.117
- Accumulated depreciation, 4.111, 4.114, 5.297
- Accumulated impairment losses, 5.297
- Accumulated impairment losses on nonfinancial assets, 4.111, 4.114–4.115
- Accumulated profit/loss for the period, 2.83, 4.51
- Accumulation accounts, 8.4, 8.19, 8.23–8.31, Box 8.1
- Acquirer of the short position, 5.229
- Acquisition approach, 5.92, 5.94–5.95
- Acquisitions, 3.101
- Actively traded securities, 5.58
- Adding-up requirements, 5.3
- Adjustable-rate securities, 5.66n
- ADRs. *See* American depository receipts
- Aggregate data, 8.76
- Agricultural banks, 3.85
- Aid agencies
  - residency, 3.52
- Aircraft
  - crew member residency, 3.28
- Allocated gold deposits
  - classification of, 4.8–4.9
- Allowances, 5.10
- Allowances for losses on impaired assets, 1.27, 2.43
- AMCs. *See* Asset management companies
- Amendment to IAS 39-Financial Instruments: Recognition and Measurement. The Fair Value Option*, 2.16
- American call (put) options, 4.83, 4.85–4.86, 5.265, 5.270–5.275, 5.281
- American depository receipts, 4.48n
- Amortized cost
  - defined, 2.45
  - securities valuation, 2.67
- Ancillary corporations, 3.9, 3.36–3.37
- Annuities, 4.37–4.38, 4.138
- ARIMA program, 6.73–6.84, 6.86–6.87, Box 6.5, Box 6.6, Box 6.7
- Arrears
  - interest, 1.27, 5.128–5.129
  - principal, 5.144
- Asian options, 4.84
- Asset accounts
  - debits and credits to, 2.77
- Asset-backed securities, 4.14, 4.19–4.25, 8.174
- Asset management companies, 3.108
- Assets. *See* Financial assets; Financial assets and liabilities; Nonfinancial assets
- Associated firms, 3.146
- Associates, 3.9, 3.146
- Autonomous agencies, 3.165–3.169
- Autonomous pension funds, 3.116, 3.188, 4.57
- Autonomous units, 3.157
- Autopilot arrangements, 3.149
- Autoregressive Integrated Moving Average models, Box 6.6
- Available-for-sale financial assets, Box 2.3

- Bad debts, 5.87
- Balance of payments statistics, 8.107
- Balance sheets
  - analyzing country's financial vulnerability, 8.14
  - financial statistics framework, 8.19–8.22
  - IFRSs and *MFSM* methodology, 2.22
  - loans on a gross or net basis, 2.26
  - overview, 8.4
  - periodicity, 2.38
  - relationship with accumulation accounts, Box 8.1
  - SNA* integrated financial account, 8.122–8.166
- Bank draft, 4.5
- Bank of England, 2.87, 6.63, Box 6.4
- Bank restructuring agencies, 3.129
- Bankers' acceptances, 3.98, 4.33–4.35
- Banks in liquidation, 3.93–3.95, 8.134
- Banque Centrale des Etats de l'Afrique de l'Ouest, 3.71, 3.75, 6.23
- Banque des Etats de l'Afrique Central, 3.71, 3.75, 6.23
- Barrier options, 4.84
- Basic flow of funds accounts, 8.37–8.44, 8.94, 8.99–8.121
- Basket default credit swap agreement, 4.92
- BCEAO. *See* Banque Centrale des Etats de l'Afrique de l'Ouest
- BEAC. *See* Banque des Etats de l'Afrique Central
- Bearer-type securities, 2.106n, 5.113–5.118
- Below-the-line components, 8.101
- Bid and asked prices, 5.322–5.324
- Bid-offer spread, 4.84
- Bill of exchange, 4.33
- Binary options, 4.84
- Binomial-tree model, 5.267, 5.272–5.273
- Black model, 5.274, 5.276
- Black-Scholes options pricing model, 5.267–5.276, 5.287
- BOE. *See* Bank of England
- Bond funds, 4.45
- Book value
  - amortized cost equivalence, 2.45
  - defined, 2.44
  - differences between the *1993 SNA* methodology and the *Guide*, 1.12
  - of a domestic currency deposit, 2.47
  - of a domestic currency loan, 2.46
  - of non-interest-bearing assets and liabilities, 2.48
  - own funds, 1.14, 5.190
  - rate of return on equity calculation, 5.179
  - valuation of financial assets and liabilities, 2.51, 2.56–2.57, Box 2.2
- BOOT schemes. *See* Build-own-operate-transfer schemes
- Border workers, 3.23
- BOT schemes. *See* Build-operate-transfer schemes
- Branches
  - of multinational conglomerates, 3.30
- Broad money
  - change in, 8.105
  - deposits excluded from, 2.79, 2.119
  - deposits included in, 2.79, 2.119, 4.123
  - seasonally adjusted, 6.55
  - securities other than shares excluded from, 2.119
  - securities other than shares included in, 2.119
  - transferable deposits, 4.4
- Brokers
  - function of, 3.121
- Build-operate-transfer schemes, 3.171
- Build-own-operate-transfer schemes, 3.171n
- Building societies, 3.83
- Bureaux de change, 3.122
- Buyer of a futures contract, 5.229
- Call-option payoff, 5.283
- Call options, 4.83, 4.90, 5.71
- Cap, 5.69
- Capital account, 8.4, 8.24, 8.101, 8.169–8.170, 8.211
- Capital asset pricing model, 5.177
- Capital notes, 5.66n
- Capital transfers, 8.107
- CAPM. *See* Capital asset pricing model
- Captive finance companies, 3.99
- Captive insurance subsidiaries, 3.111
- Cash basis accounting, 8.78
- Cash dividends, 4.84
- Cash-driven securities repurchase agreements, 5.140n
- Cash flow hedges, 2.62, 5.333
- Cash settlements, 5.286
- Cashier's checks, 4.4–4.5
- CAT bonds. *See* Catastrophe bonds
- Catastrophe bonds, 4.93
- Catastrophic losses, 7.27
- CBA. *See* Cost-benefit analysis
- CBS. *See* Central Bank Survey
- CDD. *See* Cooling degree day
- CDOs. *See* Collateralized debt obligations
- Census reporting, 2.99
- Census surveys, 2.103
- Centers of economic interest, 2.1, 3.16
- Central bank
  - acquisition of financial risks, 3.62
  - balance sheet data, 8.133
  - central government fiscal agents, 3.62
  - claims on, Box 7.4
  - currency, 6.3–6.4
  - data reporting, 7.6–7.9
  - differences between the *1993 SNA* methodology and the *Guide*, 1.10
  - float, 4.105, 7.32
  - Form 1SR, 7.58–7.60, Appendix II
  - functions of, 3.60–3.65
  - government bankers, 3.60
  - IMF securities, 4.10
  - liabilities, 3.61
  - other changes in the volume of assets, 7.79
  - stock and flow data, 5.1
  - Central Bank Survey*, 1.11, 2.20, Annex 7.3

- Central government
  - claims on, 1.17n, Box 7.4
  - contra-entry to currency issue, 7.57
  - currency issuance, 3.158, 6.5–6.8, 7.57
  - deposit liabilities, 3.89
  - deposits issued by, 6.38
  - financial activities, 3.158
  - function of, 3.156–3.159
  - liabilities to, 1.17n, 7.57
- Centralized models, 3.71, 3.73–3.74, Box 3.2
- Chance, Don M., 5.268
- Changes in classification and structure, 7.27
- Changes in classification of assets and liabilities, 7.27
- Changes in sector classification and structure, 7.27
- Chart of accounts, 2.4, 2.69–2.71
- Chooser options, 4.84
- Claims
  - on nonresidents, 7.42–7.43
  - nonresidents and central government, 1.17n
  - on resident sectors, 7.44, Box 7.4
- Classification of financial assets, 2.51–2.56, 4.1, Box 2.2, Box 2.3
- Clean price, 5.105
- Clearing offices, 3.120
- Closed circulation of electronic money, 6.49
- Closed-end funds, 4.46
- Closed-end investment pool, 5.160
- Closing stocks, 5.4, 5.7, 5.230
- CMA. *See* Common Market Area
- CMOs. *See* Collateralized mortgage obligations
- Co-circulation of currency, 6.15, 6.20–6.22, 6.29–6.35
- Coins. *See* Currency
- Collar, 5.69
- Collateralized debt obligations, 4.21n
- Collateralized loans, 3.101, 4.132
- Collateralized mortgage obligations, 4.21
- Collateralized security issuance, 3.131
- Collective services, 3.156, 3.179
- Commemorative coins, 4.117, 6.9–6.11
- Commemorative notes, 4.117
- Commercial banks, 3.56, 3.78–3.79
- Commercial loans, 5.123
- Commercial paper, 8.174
- Commissions. *See* Fees and commissions
- Commitment fees, 5.320
- Common currency area, 3.70
- Common Market Area, 6.22
- Common stock. *See* Shares and other equity accounts
- Complementation estimation method, 8.194
- Composite insurance companies, 3.110
- Composite valuation approach, 5.74
- Compound basis, 5.123
- Compound options, 4.84
- Compounding factor, 5.213
- Conglomerates, 3.9
- Consolidation adjustments, 7.51–7.54, 7.82, Annex 7.2
- Constant-dividend DDM, 5.174
- Constant-growth DDM, 5.175
- Constant ratio estimation method, 8.195
- Construction companies
  - residency, 3.34–3.35
- Consumer credit, 3.58, 3.98
- Consumer installment loans, 7.89
- Consumption assets, 5.221n
- Contingent liabilities, 4.119
- Continuously compounded basis, 5.213
- Contra-entries, 2.73, 5.215, 7.57
- Contract-add-operate-transfer schemes, 3.171n
- Control totals, 8.71
- Conversion options, 5.71
- Cooling degree day, 4.93
- COP. *See* Call-option payoff
- Corporations
  - control of, 3.9
  - features of, 3.8
  - rate of return on equity, 5.178–5.179
- COs. *See* Coupon only claims
- Cost-benefit analysis, 2.88–2.89
- Cost of goods sold, 2.72
- Counterpart data, 8.60, 8.137
- Coupon basis securities, 7.89
- Coupon bond with time-variant discount rates, 5.213
- Coupon only claims, 4.22
- Coupon-only securities, 5.85
- Covered call options, 4.87
- Credit
  - seasonal adjustment, 6.64–6.88
- Credit-card debt, 4.39–4.40
- Credit cards, 3.98
- Credit default swaps, 4.92
- Credit derivatives, 4.78, 4.91–4.93
- Credit-spread call (put) options, 4.92
- Credit union/cooperative shares, 4.128
- Credit unions, 3.84
- Creditor approach, 5.93–5.94
- Creditor recording symmetry, 2.26
- Credits
  - effect on accounts, 2.75, 2.77–2.79, Box 2.4
- Crew members
  - residency, 3.28
- Cross-border workers, 3.23–3.24
- Cross-currency interest rate swaps, 4.81, 5.257, 7.89
- Currency
  - from central banks, 6.3–6.4
  - central government issuance, 3.158, 6.5–6.8, 7.57
  - in circulation, 5.42, 6.2
  - classification of, 1.11
  - co-circulation, 6.15, 6.20–6.22, 6.29–6.35
  - commemorative coins, 4.117, 6.9–6.11
  - electronic money, 1.28, 6.47–6.51
  - foreign, 5.43–5.47, 6.12–6.35
  - issuance of, 6.2
  - liability for issuance, 3.75
  - monetary aggregate component, 6.2

- national, 5.41–5.42, 6.2–6.11
- outside depository corporations, 5.42, 6.2
- placement in circulation, 6.2
- replacement, 6.2
- through other depository corporations, 6.3–6.4
- Currency boards, 3.66–3.67
- Currency of denomination
  - differences between the *1993 SNA* methodology and the *Guide*, 1.11
- Currency swaps, 4.81, 5.257–5.264
- Currency-union currency, 6.23–6.27
- Currency unions, 3.53, 3.70–3.75, Box 3.2
- Current-account balance, 8.107
- Current effective interest rate, 5.149
- Custodians, 8.185
- Cutting the tail, 2.100
  
- Daily average exchange rate, 5.25
- Daily marking to market, 4.82
- Daily settlements, 4.82
- Data adjustment, 2.104–2.107, 7.51–7.54
- Data checking, 2.12–2.13, 8.204–8.209
- Data cleansing, 2.112
- Data consistency, 1.16–1.18
- Data dissemination, 7.1, 7.67–7.73
- Data estimation, 2.104–2.107, 8.191–8.203
- Data netting, 5.325–5.330
- Data periodicity, 2.34–2.39, 7.85
- Data Quality Assessment Framework, 2.23, Box 2.1
- Data reporting
  - adjustments and estimation, 2.104–2.107
  - benefit assessment, 2.94–2.96
  - compliance costs, 2.91–2.93, 2.96
  - plausibility testing, 2.112–2.118
  - requirements, 2.87–2.94
  - validation, 2.112–2.118
- Data revision policy, 6.79
- Data sources
  - stocks and flows, 5.2
- Data transmission, 2.113n
- Data validation, 2.112–2.118
- DCs. *See* Depository corporations
- DCS. *See* *Depository Corporations Survey*
- DDM. *See* Dividend discount model
- De facto negotiable loans, 4.26
- Dealers, 3.103
- Debits
  - effect on accounts, 2.75–2.77–2.79, Box 2.4
- Debt
  - seasonal adjustment, 6.64–6.88
- Debt defeasance, 5.325–5.326
- Debt securities, 8.155, 8.162
- Debtor approach, 5.92, 5.94–5.95
- Debtor recording symmetry, 2.26
- Decentralized models, 3.72, 3.73–3.74, Box 3.2
- Deferred tax assets, 4.110
- Deferred tax liabilities, 4.117
  
- Defined benefit plans, 3.114, 4.57n
- Defined contribution plans, 3.114, 4.57n
- Delivery dates, 4.82
- Delivery price, 5.218
- Demand deposits, 2.55
- Demonetization of gold, 5.38
- Demonetized currency, 6.1
- Deposit insurance premium, 4.72n
- Deposit overdrafts, 4.3
- Deposit principal
  - defined, 2.47
- Deposit takers. *See* Other depository corporations
- Depository corporations
  - claims on, Box 7.4
  - consolidation in, 7.51
  - differences between the *1993 SNA* methodology and the *Guide*, 1.10
  - other changes in the volume of assets, 7.80
  - subsectors, 3.60–3.3.95
- Depository Corporations Survey*, 1.17n, 2.20, 8.6, Annex 7.3
- Depository receipts, 4.48–4.50, 5.155n, 5.158–5.159
- Deposits
  - accrued interest on, 2.119–2.121, Box 2.5, Annex 2.1
  - cashier's checks, 4.4–4.5
  - classification of, 1.11, 4.2, 5.48–5.50
  - credit union/cooperative shares, 4.128
  - distinguishing from loans, 4.122–4.142, Annex 4.1
  - excluded from broad money, 2.119, 6.52, Appendix I, Appendix II
  - gold deposits, 4.8–4.9
  - impaired deposits reclassification, 4.11–4.13
  - included in broad money, 4.123, Box 6.2, Box 7.5, Appendix I, Appendix II
  - insured, 4.126
  - issued by central government, 6.38
  - issued by financial corporations in liquidation or reorganization, 6.39–6.46
  - issued by public nonfinancial corporations, 6.36–6.37
  - long-term, 7.89
  - margin deposits, 4.6–4.7, 4.130
  - money-market mutual fund shares, 4.127
  - non-formula-based variable interest rates, 4.125
  - nonperforming, 4.11
  - other deposits, 2.121–2.122
  - repurchase agreements, 4.129
  - reserve deposits, 6.53
  - reserve requirements, 6.89–6.92
  - in residential mortgage loan contracts, 4.131
  - short-term, 7.89
  - transferable, 2.119, 2.121–2.122, 4.2, 4.4, 4.122
  - valuation of, 2.55
  - zero-interest, 4.124
- Depreciation allowances, 5.12
- Depreciation of property, plant, and equipment, 5.295
- Derivatives. *See* Financial derivatives
- Derived data, 5.6
- Design-build-finance-operate schemes, 3.171n

- Detachable options, 4.16
- Detailed flow of funds matrices, 8.45–8.50, 8.167–8.190
- Develop-operate-transfer schemes, 3.171n
- Development capital firms, 3.105
- Development projects
  - agency management of internationally financed projects, 3.167
- Diagnostic checking, 6.80, 6.84
- Differencing, Box 6.6, 8.62
- Diplomatic representations
  - locally recruited staff residency, 3.27
  - residency, 3.49–3.50
- Direct investment, 8.153
- Direct investment enterprises, 3.146, 4.44
- Direct investment in equity, 8.149
- Dirty price, 5.105
- Disaggregation, 2.79, 2.81, 2.84, 7.88–7.90
- Discount basis securities, 4.14
- Discount houses, 3.86
- Discount rate, 5.58
- Discounted present values, 5.54
- Discrepancies, 8.79, 8.115, 8.211–8.213
- Discretionary participation, 4.62–4.63
- Dissemination Standards Bulletin Board, 7.68
- Dissimilar corporations, 5.169
- Distressed corporations
  - fair value, 5.186
- Dividend discount model, 5.172–5.176
- Dividend payout ratio, 5.178
- Dividends payable, 4.111–4.112
- Dividends receivable, 4.98–4.99
- Divisia money, 6.60–6.63, Box 6.4
- Dollarization, 6.16–6.19, 6.29–6.35
- “Dollarized” economies, 5.42n, 6.14
- Domestic ancillaries, 3.36
- Domestic credit, 8.105
- Domestic financing, 8.105
- Domestic sectors, 8.100
- Double-entry accounting, 2.73
- Double securitization, 4.19
- DQAF. *See Data Quality Assessment Framework*
- DRs. *See Depository receipts*
- DSBB. *See Dissemination Standards Bulletin Board*
  
- Early-payment discounts, 4.95
- Earnings per share, 5.181, 5.183
- Earnings retention ratio, 5.178
- Eastern Caribbean Central Bank, 3.67, 3.71, 6.23, 6.27
- Eastern Caribbean Currency Union, 6.27
- ECB. *See European Central Bank*
- ECCB. *See Eastern Caribbean Central Bank*
- ECCU. *See Eastern Caribbean Currency Union*
- Economic appearance of intangible nonproduced assets, 7.27
- Economic development loans, 3.98
- Economic time series
  - decomposition of, 6.85–6.87
  - seasonal adjustment, 6.64–6.66
- Economically significant prices, 3.11, 3.136
- Effective interest rate, 2.45, 5.92, 5.320
- Electronic currency corporations, 3.105
- Electronic data transmission, 2.113n
- Electronic money, 1.28, 6.47–6.51
- Electronic payments, 3.127
- Embassies
  - residency, 3.49–3.50
- Embedded derivatives, 4.14, 4.16–4.18, 4.62, 4.64, 5.66n, 5.71–5.79
- Emergency credits, 3.128
- Employee Benefits*, 2.16
- Employee stock options, 1.14, 4.88, 5.287–5.289
- Energy derivatives, 4.78, 4.91–4.93
- Environmental protection agencies, 3.163
- EPS. *See Earnings per share*
- Equity account, 2.43
- Equity funds, 4.45
- Equity swaps, 4.81
- Errors and omissions, 8.29
- ESA. *See European System of Accounts*
- Estimation modeling, 6.80, 6.83
- Estimation of transactions and valuation changes, 5.20, 5.22–5.33, Annex 5.1
- Estimation techniques, 8.76, 8.191–8.203
- European call (put) options, 4.83, 4.85, 5.265, 5.269–5.274
- European Central Bank, 2.87, 3.72, 6.23
- European depository receipts, 4.48n
- European System of Accounts, 3.18
- Exchange rate movements
  - estimation of changes, 5.22–5.33
- Exchange rates, 2.58–2.59
- Exchange stabilization funds, 3.68, 3.158
- Exchange-traded options, 4.83, 7.89
- Exclusion principle, 3.152
- Executive powers, 3.160
- Executive stock options, 4.88–4.89
- Exercise limits, 4.84
- Exotic options, 4.77, 4.84, 5.208
- Expected loan losses, 5.145, 5.147–5.149, 7.32
- Expected losses, 1.27
- Export bill, 4.35
- Export credit refinancing facilities, 4.34
- Export finance firms, 3.105
- Exporter credit, 4.35
- External financing, 8.105
- Extrapolation estimation methods, 8.202
  
- Face value, 2.49
- Factoring companies, 3.105
- Fair value, 1.12, 2.44, 2.49–2.57, 2.67, 5.2, 5.54–5.64, 5.163–5.165, 5.185–5.187, Box 2.2, Box 2.3
- Fair-value hedges, 2.62, 5.333
- Fair Value Option, 2.67
- FCS. *See Financial Corporations Survey*

- FCs. *See* Financial corporations
- Fees and commissions  
 as integral part of effective interest rate, 5.320  
 transaction costs, 5.313
- Finance companies  
 function of, 3.98
- Financial account, 2.21, 8.4, 8.24–8.31
- Financial advisory services, 3.121
- Financial assets. *See also* Financial assets and liabilities  
 annuities, 4.37–4.38  
 asset-backed securities, 4.14, 4.19–4.25  
 available-for-sale, Box 2.3  
 claims or obligations arising from transactions, 4.95  
 classifications, 2.51–2.57, 4.1, Box 2.2, Box 2.3  
 credit-card debt, 4.39–4.40  
 defined, 2.43  
 deposit overdrafts, 4.3  
 deposits, 4.2  
 distinguishing between deposits and loans, 4.122–4.142  
 financial derivatives, 4.77–4.93  
 financial leases, 4.36  
 financial assets scope, 8.18  
 gold deposits, 4.8–4.9  
 IMF securities, 4.10  
 impaired deposit reclassification, 4.11–4.13  
 institutional units as holders of, 3.2  
 insurance technical reserves, 4.52–4.76  
 loans, 4.26–4.40  
 margin deposits, 4.6–4.7  
 monetary gold, 5.37–5.38  
 negotiable, 4.14  
 other accounts receivable/payable, 4.94–4.121  
 pass-through securities, 4.14, 4.29–4.25  
 securities other than shares, 4.14–4.15  
 shares and other equity, 4.41–4.51  
 Special Drawing Rights, 5.39–5.40  
 valuation rules, 2.58–2.67, Box 2.2, Box 2.3
- Financial assets and liabilities. *See also* Financial assets  
 defined, 2.43  
 at fair value through profit or loss, Box 2.3  
 foreign-currency-denominated, 2.58–2.59  
 held for trading, Box 2.3
- Financial auxiliaires  
 differences between the 1993 SNA methodology and the  
*Guide*, 1.10  
 subsectors, 3.119–3.131
- Financial corporations  
 balance-sheet periodicity, 2.36  
 claim on nonresidents, 7.42–7.43  
 claims on resident sectors, 7.44, Box 7.4  
 consolidation in, 7.51  
 data adjustments and estimation, 2.105–2.106  
 liabilities to nonresidents, 7.42–7.43  
 in liquidation or reorganization, deposits issued by,  
 6.39–6.46  
 reporting by, 7.4–7.17  
 sectoral balance sheets, 7.2, Appendix I  
 source data, 2.5–2.10  
 subsectors, 3.56–3.131  
 surveys of, 1.29, 7.3, 7.39–7.54, 7.83, Annex 7.3  
*Financial Corporations Survey*, 2.20, Annex 7.3
- Financial derivative corporations  
 function of, 3.125
- Financial derivative intermediaries, 3.104, 3.125
- Financial derivatives  
 classification of, 1.11  
 credit derivatives, 4.78, 4.91–4.93  
 currency swaps, 5.257–5.264  
 embedded derivatives, 4.14, 4.16–4.18, 4.62, 4.64  
 employee stock options, 5.287–5.289  
 energy derivatives, 4.78, 4.91–4.93  
 exotic options, 4.77, 5.208  
 forward rate agreements, 5.241–5.247  
 forward-type contracts, 4.77, 4.81–4.82, 5.217–5.228,  
 7.89  
 futures contracts, 4.77, 5.229–5.240  
 general principles, 5.208–5.216  
 insurance derivatives, 4.78, 4.91–4.93  
 interest-rate-swap contracts, 5.248–5.256  
 issuance of, 3.125  
 markets, 4.77–4.80  
 notional principal, 7.89  
 options contracts, 4.77, 4.83–4.90, 5.265–5.286  
 types of, 4.77  
 weather derivatives, 4.78, 4.91–4.93
- Financial guarantee corporations  
 function of, 3.123
- Financial instrument coverage, 7.86–7.87
- Financial Instruments: Disclosures*, 2.16
- Financial Instruments: Presentation*, 2.16
- Financial Instruments: Recognition and Measurement*,  
 2.16, Box 2.3
- Financial intermediation  
 characteristics of, 3.56  
 defined, 3.76
- Financial leases, 4.36, 4.137, 5.132–5.136
- Financial leasing companies  
 function of, 3.100
- Financial liabilities  
 defined, 2.43
- Financial reporting standards. *See* National financial  
 reporting standards
- Financial service fees, 5.313, 5.320–5.321
- Financial statements  
 accrued interest reporting, 5.109  
 going concern basis, 2.32  
 IFRSs and MFSM methodology, 2.17–2.26  
 overview, 1.32, 2.19, 2.21–2.24  
 periodicity and timeliness, 2.26, 2.34–2.41, 2.37–2.41  
 terminology, 2.42–2.50
- Financial statistics  
 balance sheets, 8.19–8.22, Box 8.1  
 compilation methods, 8.2, 8.59–8.65  
 counterparts, 8.60–8.62



- data checking, 8.204–8.209
- definition of, 8.16–8.18
- detailed matrices, 8.94, 8.167–8.190
- discrepancies, 8.79
- editing, 8.204–8.209
- effect of secondary market transactions, 8.183–8.185
- estimation techniques for missing data, 8.191–8.203
- flow of funds accounts, 8.1, 8.32–8.33, 8.37–8.44
- framework for, 8.19–8.33
- imperfect data reporting, 8.80–8.93
- inconsistent reporting, 8.81–8.83
- indirect reporting, 8.88–8.89
- instrument tables, 8.56–8.58
- Level 1, 8.94, 8.99–8.121
- Level 2, 8.94, 8.122–8.166
- Level 3, 8.94, 8.167–8.190
- levels of, 8.9
- matrix formats, 8.36–8.50
- no reporting, 8.90
- overview, 8.1–8.15
- partial reporting, 8.84–8.87
- presentation of, 8.34–8.58
- residual calculations, 8.63–8.65
- scope of, 8.16–8.18, 8.17
- sector tables, 8.52–8.55
- SNA integrated financial account, 8.122–8.166
- source data, 8.66–8.79
- special purpose entities, 8.180–8.182
- statistical discrepancies, 8.204–8.207, 8.211–8.214
- structure of, 8.99–8.190
- systematic development of, 8.94–8.98
- time-series presentations, 8.51–8.58
- Financial stocks. *See* Stocks
- Financial transactions, 8.27
- Fiscal authority, 3.176
- Fixed-coupon bond, 5.98–5.100
- Fixed-coupon securities, 5.57
- Fixed-for-fixed currency swap, 5.257–5.258
- Fixed-for-floating currency swap, 5.257
- Fixed-rate coupon basis securities, 4.14
- Fixed-rate loans, 7.89–7.90
- Fixed-rate securities, 7.89
- Flex options, 4.84
- Floating-rate notes, 5.66n
- Floor, 5.69
- Flow data estimation, 2.108–2.111
- Flow increment estimation method, 8.196
- Flow of funds accounts
  - basic flow of funds accounts, 8.37–8.44, 8.94, 8.99–8.121
  - compiling, 8.1
  - counterpart sectors, 8.44
  - detailed flow of funds matrices, 8.45–8.50, 8.167–8.190
  - overview, 1.32, 2.21
  - structure of, 8.32–8.33
  - three-dimensional structure, 8.45–8.49
  - two-dimensional matrix, 8.44
- Flows. *See also* Stocks and flows
  - overview, 2.21
- Foreign assets, 8.17
- Foreign banks
  - representative offices, 3.126
- Foreign controlled nonfinancial corporations
  - classification of, 3.146
  - differences between the 1993 SNA methodology and the *Guide*, 1.10
- Foreign currencies, 5.43–5.47, 6.12–6–35, 7.89
- Foreign-currency-denominated instruments
  - valuation of, 2.58–2.59
- Foreign diplomatic representations
  - residency, 3.49–3.50
- Foreign-direct-investment transactions, 8.105
- Foreign exchange companies
  - function of, 3.122
- Foreign exchange policy, 3.70
- Foreign liabilities, 8.17
- Foreign operations
  - hedges of a net investment in, 2.62
- Foreign unit of account, 6.12
- Form 1SR, 7.58–7.60, Appendix II
- Form 2SR, 7.58–7.59, Appendix II
- Form 4SR, 7.58–7.59, Appendix II
- Form 5SR, 6.55–6.56, 7.58, Appendix II
- Forward contract on currencies, 5.223
- Forward contracts, 4.77, 5.217–5.228, 7.89
- Forward rate agreements, 4.81, 5.241–5.247
- Forward start options, 4.84
- Forward-type contracts, 4.77, 4.81–4.82
- Framework for the Preparation and Presentation of Financial Statements*
  - accrual accounting, 2.27, 2.31
  - applicability of, 2.13–2.14
  - data quality criteria, 2.23–2.25
  - financial statement methodology, 2.17
  - terminology, 2.42–2.50
- FRAs. *See* Forward rate agreements
- Fully amortized loans, 5.125
- Fully privatized corporations, 3.140
- Funds contributed by owners, 4.42, 4.51, 7.49
- Future value, 5.213
- Futures contracts, 4.77, 4.81–4.82, 5.229–5.240, 7.89
- Gains on financial instruments
  - profit-or-loss accounts, 2.81
  - from revaluations, 2.61–2.65, 2.82
  - unrealized, 2.63n
- GDDS. *See* General Data Dissemination System
- GDRs. *See* Global depository receipts
- General and special reserves, 2.86, 4.51, 5.10
- General Data Dissemination System, 7.69
- General government sector
  - financial statistics scope, 8.17
- General government units
  - function of, 3.152–3.155

- redistribution of income or wealth, 3.152
- separate legal identities, 3.154
- taxation, 3.152, 3.156, 3.176, 3.179
- transfers, 3.152
- General ledgers, 2.4, 2.68–2.69, 2.79–2.81
- General provisions, 5.147
- General reserves, 2.86
- GFSM 2001. See Government Finance Statistics Manual 2001*
- Giro account, 4.2
- Global depository receipts, 4.48n
- Going concerns, 2.32–2.33
- Gold
  - in an allocated account, 4.8
  - in an unallocated account, 4.8–4.9
  - classification of, 1.14
  - deposits, 4.8–4.9
  - monetary gold, 5.37–5.38
  - transactions, 5.17
  - valuation of, 5.37–5.38
- Gold swaps, 5.137–5.142
- Government-affiliated agencies, 3.68–3.69
- Government agencies, 3.136
- Government branches, 3.160–3.162
- Government debt, 8.71
- Government entities
  - differences between the 1993 SNA methodology and the *Guide*, 1.10
- Government Finance Statistics Manual 2001*, 8.176
- Government units
  - central, 3.156–3.159
  - functions of, 3.11–3.12
  - general, 3.152–3.155
- Governments
  - local, 3.179–3.183
  - provincial, 3.175
  - regional, 3.175
  - state, 3.175–3.178
- Grant date, 5.287
- Grants, 3.179
- Growth stocks, 5.180
- Guarantors
  - function of, 3.123
- Guidance on Implementing IAS 39-Financial Instruments: Recognition and Measurement*, 2.16
- Guidance on Implementing IFRS 7-Financial Instruments: Disclosures*, 2.16
- A Guide to Money and Banking Statistics in International Financial Statistics*, 1.5
- HDD. *See* Heating degree day
- Headquarters office
  - regional central banks, 3.53, 3.72
- Heating degree day, 4.93
- Hedge accounting, 5.331–5.337
- Hedge funds, 3.105
- Hedged item, 5.334
- Hedging effectiveness, 5.334
- Hedging instrument, 5.334
- Hedging relationships, 2.60–2.62
- Held-to-maturity investments, Box 2.3
- Holding corporations, 3.9, 3.36–3.37, 3.107
- Horizontal adding-up requirements, 5.3
- Horizontal checks, 5.4
- Household unincorporated market enterprises, 3.147–3.148
- Households
  - defined, 3.5, 3.189
  - differences between the 1993 SNA methodology and the *Guide*, 1.10
  - economic activities, 3.6
  - employer's, 3.190
  - net equity in life insurance reserves, 4.61–4.64
  - net equity in pension funds, 4.68–4.70
  - production of goods and services, 3.192–3.195
  - residency, 3.21
  - source data, 8.21
- Hull, John C., 5.268
- Hybrid funds, 4.45
- IAS 20-Accounting for Government Grants and Disclosure of Government Assistance*, 2.15
- IASB. *See* International Accounting Standards Board
- IASB Framework. See Framework for the Preparation and Presentation of Financial Statements*
- IASs. *See* International Accounting Standards
- Identification codes, 3.140
- Identification modeling, 6.80–6.82
- IFAC. *See* International Federation of Accountants
- IFRS. *See* International Financial Reporting Standards
- IFS. See International Financial Statistics*
- IIP. *See* International Investment Position
- IMF. *See* International Monetary Fund
- IMF Accounts No. 1 & Securities*, 7.64
- IMF No. 1 Account, 7.63–7.64
- IMF Quota*, 7.63–7.64
- Impaired deposits
  - reclassification of, 1.11, 4.11–4.13
- Impaired financial assets
  - disposal of, 3.108
  - expected losses, 1.27
  - provisions for losses, 1.27, 5.10
  - reclassification of, 1.11, 4.139
  - write-offs, 5.10
- Impaired loan trading, 4.28
- Impaired securities other than shares
  - classification of, 1.11, 5.87–5.91
- Impairment losses, 5.297
- Imperfect data reporting, 8.80–8.93
- Implementation Guidance for IAS 39*, 2.13
- Implicit trading costs, 5.312
- Import bill, 4.35
- Import finance firms, 3.105
- In-the-money call (put) options, 4.83

- In the national unit of account, 6.18–6.19
- Included in broad money, 2.79
- Inconsistent data reporting, 8.81–8.83
- Incremental borrowing rate, 5.90
- Indirect data reporting, 8.88–8.89
- Individual Retirement Accounts, 3.118
- Infrequently traded securities, 5.63
- Infrequently traded shares, 5.163–5.165
- Initial margin, 5.233
- Initial measurement, 2.43
- Installment loans, 5.125–5.126
- Institutional households, 3.191
- Institutional units
  - attributes of, 2.43
  - center of economic interest, 2.1
  - corporations, 3.8–3.10
  - defined, 3.3
  - differences between the *1993 SNA methodology and the Guide*, 1.10
  - financial corporations sector, 2.2, 3.56–3.131
  - general government sector, 3.152–3.188
  - going concerns, 2.33
  - government units, 3.11–3.12
  - households, 3.5–3.6, 3.189–3.195
  - legal entities, 3.7
  - listing of, 3.140
  - nonfinancial corporations sector, 3.132–3.151
  - nonprofit institutions, 3.13–3.15, 3.39
  - nonprofit institutions serving households sector, 3.196–3.199
  - nonresident units, 3.42–3.53
  - quasi-corporations, 3.10
  - residency, 3.2, 3.16–3.18
  - resident units, 3.19–3.41
  - sectorization of, 3.54–3.55
  - sectors, 3.1, 3.55, Box 3.1
  - social entities, 3.7
  - subsectors, Box 3.1
- Institutions for collective investment, 3.102
- Instrument tables, 8.56–8.58
- Insurance
  - contracts, 4.62
  - deposit components, 4.62
  - net equity of households, 4.61–4.64
  - prepayment of premiums, 4.71–4.74, 4.95, 5.205–5.206, Box 2.2
- Insurance auxiliaries
  - function of, 3.124
- Insurance corporations
  - accrued interest, 2.122
  - differences between the *1993 SNA methodology and the Guide*, 1.10
  - function of, 3.109
  - holding corporation classification, 3.107
  - own assets, 4.56
  - reserve assets, 4.56
- Insurance derivatives, 4.78, 4.91–4.93
- Insurance technical reserves
  - classification of, 1.11, 4.54–4.60
  - general principles, 5.193–5.195
  - net equity of households in life insurance reserves, 4.61–4.64, 5.196–5.198
  - net equity of households in pension funds, 4.68–4.70, 5.199–5.204
  - plan assets, 4.57n
  - premium supplements, 4.55n
  - prepayment of insurance premiums, 4.71–4.74, 5.205–5.206
  - reinsurance, 4.65–4.67
  - reserves against outstanding claims, 4.75–4.76, 5.207
  - social insurance schemes, 4.52–4.53
- Insured deposits, 4.126
- Intangible nonproduced assets, 7.27
- Integrated financial account
  - overview, 1.32
- Interest
  - accrued, 2.28–2.30, 2.80, 2.119–2.122, 7.32, Box 2.5
  - arrears, 1.27, 5.128–5.129, 7.32
  - effective rate, 2.45
  - indexation, 5.71
- Interest-bearing claims and obligations, 4.95
- Interest-only mortgage loans, 5.125n
- Interest-only strips, 4.23
- Interest-rate swap contracts, 4.81, 5.248–5.256
- Interest rates
  - cap, 5.274n
  - collar, 5.274n
  - floor, 5.274n
  - parity theorem, 5.223
- Interim financial reports, 2.35
- Internal service organizations, 3.138
- International Accounting Standards*, 2.13–2.16, 2.18
- International Accounting Standards Board, 2.11
- International Accounting Standards Committee, 2.35
- International depository receipts, 4.48n
- International Federation of Accountants, 2.15
- International Financial Reporting Interpretations Committee, 2.13
- International Financial Reporting Standards, 1.8, 2.11–2.17, 2.22, 2.26, 3.150
- International Financial Reporting Standards 2005*, 2.14
- International Financial Statistics*, 1.4, 6.57–6.59, 7.71–7.73
- International Investment Position, 8.98, 8.148–8.156
- International Monetary Fund
  - Data Quality Assessment Framework, 2.23, Box 2.1
  - liabilities to, 7.57
  - macroeconomic statistics manuals and guides, Box 1.1
  - No. 1 and No. 2 Accounts, 5.49n
  - quota subscription, 4.98, 4.107, 5.293
  - reporting to, 7.58–7.66
  - securities, 4.10
  - web site, 8.15

- International organizations
  - pension funds of, 3.29
  - residency, 3.52
  - staff residency, 3.25
- International Public Sector Accounting Standards, 2.15
- International reserves, 3.158
- International Reserves and Foreign Currency Liquidity: Guidelines for a Data Template*, 7.61
- Intervention modeling, 6.80n
- Intramarket trading, 4.50
- Intrinsic value, 5.280
- An Introduction to Derivatives & Risk Management*, 5.268
- Inverse-floating rate notes, 5.275n
- Investment banks, 3.101
- Investment management fees, 5.320
- Investment pooling, 3.131
- Investment pools, 3.102, 4.45–4.47, 5.160–5.162, 7.89
- Investment trusts, 3.102
- Investments
  - held-to-maturity, Box 2.3
- IOs. *See* Interest-only strips
- IPSASs. *See* International Public Sector Accounting Standards
- IRAs. *See* Individual Retirement Accounts
- Irregular components, 6.85
- Issue price, 2.49
- Items in the process of collection, 4.98, 4.103–4.106
  
- Joint account with a resident, 3.45
- Judicial powers, 3.160
  
- Lagged reserve requirements, 6.89, 6.91
- Legal entities, 3.7
- Legal tender, 3.70
- Lessee, 3.100
- Letters of credit, 4.135
- Level 1 financial statistics, 8.94, 8.99–8.121
- Level 2 financial statistics, 8.94, 8.122–8.166
- Level 3 financial statistics, 8.94, 8.167–8.190
- Level yield to maturity, 5.92
- Leveraged-rate notes, 5.275n
- Liabilities. *See also* Financial assets and liabilities
  - central government, 1.17n, 7.57
  - nonresidents, 1.17n
  - to nonresidents, 7.42–7.43
  - to resident sectors, 7.45–7.54, Box 7.5
  - revaluation of, 2.53
- Liability account for shares and other equity, 2.43, 5.191–5.192
- Liability accounts
  - debits and credits to, 2.77
- LIBOR zero rate, 5.249
- Life insurance
  - net equity of households in reserves, 4.61–4.64, 5.194–5.198
  - reserves against outstanding claims, 4.75–4.76
  - term insurance, 4.72n
- Life insurance corporations
  - function of, 3.110
- Liquidations, 3.93–3.95, 6.39–6.46, 8.134
- Listed corporations, 2.3
- Load funds, 5.162
- Loan-debt swaps, 5.121
- Loan-equity swaps, 5.121
- Loan syndication fees, 5.320
- Loans
  - accrued interest accounts, 2.121–2.122
  - annuities, 4.138
  - assignment basis, 4.31
  - assumption, 5.121
  - backed by letters of credit, 4.135
  - bankers' acceptances, 4.33–4.35
  - classification of, 1.11, Box 2.3
  - collateralized, 3.101, 4.132
  - commercial, 5.123
  - commitments, 5.320
  - de facto negotiable, 4.26
  - distinguishing from deposits, 4.122–4.142
  - financial leases, 4.137, 5.132–5.136
  - fixed-rate, 7.89–7.90
  - general principles, 5.119–5.122
  - gold swaps, 5.137–5.142
  - to the IMF, 7.63
  - impaired financial assets, 4.139
  - impaired trading, 4.28
  - installment, 5.125–5.126
  - long-term, 7.89
  - loss write-offs, 5.128
  - made under commitment, 4.136
  - memorandum items, 5.143–5.161
  - mortgages, 5.125–5.126
  - nonassignment basis, 4.31
  - nonperforming, 4.11, 5.130
  - one-time sales, 4.29
  - origination, 4.29
  - other changes in the volume of assets, 5.127–5.131
  - participations, 4.30–4.32, 5.124
  - protective covenants, 4.133
  - refinancing, 5.121
  - repurchase agreements, 5.137–5.142
  - secondary market, 4.27
  - securities lending, 5.137–5.142
  - short-term, 7.89
  - supporting balance requirements, 4.134
  - syndication, 4.30
  - trade bills, 4.33–4.35
  - variable-rate, 7.89–7.90
  - of which interest and principal arrears, 7.33
  - write-offs, 5.10
- Local governments, 3.179–3.183, Box 7.4
- Long forward contracts, 5.220–5.221, 5.224
- Long-term deposits, 7.89
- Long-term instruments
  - classification of, 1.11

- Long-term loans, 7.89
- Long-term securities, 7.89
- Lookback options, 4.84
- Loro account, 4.2n
- Loss transfer, 5.10
- Losses on financial instruments
  - profit-or-loss accounts, 2.81
  - from revaluations, 2.61–2.65, 2.82
  - unrealized, 2.63n
- Macaulay, Frederick B., 6.76
- Macro source data, 8.76
- Macroeconomic statistical systems, 1.15–1.21, Box 1.1
- Main source data, 8.67–8.73
- Margin accounts, 4.87
- Margin deposits, 4.6–4.7, 4.130
- Margin maintenance, 5.235
- Margins, 5.137
- Market
  - defined, 5.177
- Market capitalization method, 1.14, 5.166–5.169
- Market nonprofit institutions, 3.14
- Market price, 2.49
- Market price at time of issue, 2.49
- Market value, 1.12, 2.44, 2.57, 2.67, 7.32
- Master netting agreement, 5.330
- Matrix formats, 8.36–8.50
- Maturity
  - differences between the 1993 SNA methodology and the *Guide*, 1.11
  - disaggregation by, 7.88
- MBBs. *See* Mortgage-backed bonds
- MCM. *See* Market capitalization method
- Medical patients
  - residency, 3.48
- Memorandum items, 2.80, 5.143–5.161, 7.32–7.34, Box 7.3
- Merchant banks, 3.82
- Mergers, 3.101
- Metadata, 7.70
- Mezzanine companies, 3.105
- MFSM. *See* *Monetary and Financial Statistics Manual*
- Micro source data, 8.76
- Microfinancing, 3.85
- Migrant workers
  - residency, 3.44–3.46
- Military bases, 3.51
- Military personnel
  - residency, 3.51
- Ministries, 3.157
- Miscellaneous asset items, 4.98, 4.108–4.110
- Miscellaneous liability items, 4.108, 4.117
- MMMF. *See* Money-market mutual funds
- Mobile equipment units, 3.33
- Monetary aggregates
  - differences between the 1993 SNA methodology and the *Guide*, 1.13
  - Form 5SR, 6.55–6.56, 7.58, Appendix II
  - presentation in *International Financial Statistics*, 6.57–6.59
  - reporting to the IMF, 6.55–6.56
- Monetary and Financial Statistics Manual*
  - accrual accounting, 2.28, 2.31
  - historical perspective, 1.4–1.9
  - revisions in, 1.33
  - terminology, 2.42–2.50
- Monetary authorities, 3.66
- Monetary authorities accounts, 3.158, 7.55–7.57, 7.84
- Monetary base, 1.13, 3.61, 6.52–6.54
- Monetary gold
  - classification of, 1.11
  - transactions, 5.17
  - valuation of, 5.37–5.38
- Monetary statistics
  - accrued interest reporting, 5.109
  - data dissemination, 7.67–7.73
  - implementation of, 7.1
  - institutional coverage, 2.97–2.103
  - liability accounts for, 4.49–4.51
  - monetary authorities account, 7.55–7.57, 7.84
  - other changes in the volume of assets, 7.78–7.82
  - overview, 2.19–2.20, 2.22–2.24
  - reporting by financial corporations, 7.4–7.17
  - reporting to the IMF, 7.58–7.66
  - sectoral balance sheets, 7.2, 7.18–7.38, Appendix I
  - source data, 1.19–1.23
  - supplementary data, 7.74–7.77, 7.85–7.90
  - surveys of financial corporations, 7.39–7.54, 7.83, Annex 7.3
- Monetization of gold, 5.38
- Money. *See also* Currency
  - divisia money, 6.60–6.63, Box 6.4
  - electronic money, 1.28, 6.47–6.51
- Money market funds, 4.45
- Money-market mutual funds
  - deposits in the form of shares, 4.127
  - description of, 3.87
- Mortgage-backed bonds, 4.24
- Mortgage-backed securities, 4.20
- Mortgage banks, 3.83
- Mortgage pass-through securities, 5.83–5.84
- Mortgages
  - assumable loans, 4.20n
  - deposits in residential loan contracts, 4.131
  - financial company services, 3.98
  - loans, 5.125–5.126, 7.89
  - prepayment of residential loans, 4.20
- Moving-events effects in seasonality, 6.85
- Multi-employer plans, 4.57n
- Multinational conglomerates
  - subsidiaries or branches, 3.30
- Multinational corporations, 3.9
- Multiterritory enterprises, 3.38
- Mutual funds, 3.87, 3.102, 4.45

- National central banks, 3.41
- National currency, 5.41–5.42, 6.2–6.11, 7.89
- National data release, 7.67–7.70
- National financial reporting standards, 1.22, 2.3
- National offices  
regional central banks, 3.40–3.41, 3.53
- National private nonfinancial corporations  
classification of, 3.142–3.144  
differences between the *1993 SNA* methodology and the *Guide*, 1.10
- National publications, 7.67–7.70
- National universities, 3.168
- NATO. *See* North Atlantic Treaty Organization
- NAV. *See* Net asset value
- NCBs. *See* National central banks
- Negotiable financial assets, 4.14
- Negotiable instruments, 4.14n
- Net asset value, 1.14, 5.160–5.161, 5.170
- Net claims on central government, 7.41
- Net equity of households in pension funds, 4.68–4.70, 5.194, 5.199–5.204
- Net equity of households in life insurance reserves, 4.61–4.64, 5.194–5.198
- Net financial investment, 8.211
- Net foreign assets, 7.41, 8.105
- Net international reserves, 8.105
- Net investment in a foreign operation as a hedge, 5.333
- Net lending/borrowing, 8.24, 8.101, 8.107
- Net worth, 1.12n, 8.30
- Network money, 6.48
- NFI. *See* Net financial investment
- NGV. *See* No-growth value
- 1993 SNA. *See* *System of National Accounts 1993*
- NLNB. *See* Net lending/borrowing
- No-growth value, 5.181
- No-load funds, 5.162
- Non-autonomous pension funds, 3.116, 4.57
- Non-life insurance corporations, 3.110
- Non-pension-plan assets, 4.57
- Nonembedded derivatives, 4.16
- Nonfinancial assets, 5.294–5.299
- Nonfinancial corporations, public, 3.134–3.140, 6.36–6.37, Box 7.4
- Nonfinancial corporations sector  
scope, 8.17  
subsectors, 3.132–3.151
- Nonmarket nonprofit institutions, 3.14, 3.163–3.164
- Nonoperating depository corporations, 6.39–6.46
- Nonperforming deposits, 4.11
- Nonperforming financial assets, 1.27
- Nonperforming loans  
classification of, 4.11, 5.130
- Nonprofit institutions  
defined, 3.13  
engaged in market production, 3.14  
government-controlled, 3.164  
market NPIs serving business, 3.14  
nonmarket, 3.14, 3.163–3.164  
residency, 3.39
- Nonprofit institutions serving households  
categories of, 3.196–3.199  
differences between the *1993 SNA* methodology and the *Guide*, 1.10  
source data, 8.21
- Nonresident deposit accounts, 3.45
- Nonresident units, 3.42–3.53
- Nonresidents  
claims on, 1.17n, 7.42–7.43  
liabilities to, 1.17n, 7.42–7.43  
source data, 8.21
- Nonstandard American options, 4.84
- Nontraded annuities, 4.38
- Nontraded shares, 5.163–5.165
- North Atlantic Treaty Organization, 3.51
- Nostro account, 4.2
- Notes. *See* National currency
- Notional principal  
in currency swaps, 5.258  
defined, 2.50  
in interest-rate swaps, 5.248–5.249  
supplementary data, 7.89
- NPIs. *See* Nonprofit institutions
- NPISHs. *See* Nonprofit institutions serving households
- NPLs. *See* Nonperforming loans
- OCVA. *See* Other changes in the volume of assets
- ODCS. *See* Other Depository Corporations Survey
- ODCs. *See* Other depository corporations
- OFCS. *See* Other Financial Corporations Survey
- OFCs. *See* Other financial corporations
- Offset mortgages, 4.131
- Offsets, 5.278n
- Offsetting, 5.327–5.330
- Offsetting orders, 5.278n
- Offshore banks, 3.32, 3.90–3.91
- Offshore enterprises, 3.31
- Offshore financial centers, 3.92
- One-time sales, 4.29
- Open circulation of electronic money, 6.49
- Open-end funds, 4.46
- Open-end mutual funds, 5.161
- Open-market investment pools, 5.161
- Opening balance of retained earnings, 2.83
- Opening stocks, 5.4, 5.7, 5.230
- Option on an interest rate swap, 5.274
- Options, Futures, and Other Derivatives*, 5.268
- Options contracts, 4.77, 4.83–4.90, 5.265–5.286, 7.89
- Options-pricing models, 5.83
- Organized exchanges, 3.120
- Original effective interest rate, 5.149
- Original maturity, 5.56n, 7.88
- Original principal  
defined, 2.46

- Origination fees, 5.320
- Other accounts receivable/payable
  - accrued interest, 2.30
  - in sectoral balance sheets, 7.22–7.26, Box 7.1, Box 7.2, Appendix I
    - other, 4.96–4.121, 5.293, Box 7.1, Box 7.2
    - trade credit and advances, 4.94–4.95, 5.290–5.292
- Other calendar effects in seasonality, 6.85
- Other changes in assets account, 8.4
- Other changes in the volume of assets
  - central bank, 7.79
  - financial statistics framework, 2.21, 8.4, 8.30–8.31, 8.186–8.189
  - information system data, 2.84–2.86
  - monetary statistics framework, 1.30, 7.27–7.31, 7.78–7.81
  - other depository corporations, 7.80
  - other financial corporations, 7.81
  - provisions for loan losses, 5.127–5.131
  - stock and flow framework, 5.3, 5.8–5.12
- Other depository corporations
  - accrued interest, 2.119–2.120, Annex 2.1
  - balance-sheet data, 7.35–7.38, 8.133, Appendix I
  - balance-sheet periodicity, 2.36
  - claims on, Box 7.4
  - consolidation in, 7.51
  - data consistency, 1.18n
  - data reporting, 2.107, 7.10–7.12
  - differences between the *1993 SNA* methodology and the *Guide*, 1.10
  - Form 2SR, 7.58, Appendix II
  - monetary statistics, 2.97–2.103
  - other changes in the volume of assets, 7.80
  - valuation changes, 2.123–2.126
- Other Depository Corporations Survey*, 2.20, 2.97, Annex 7.3
- Other equity, 4.43, 5.156, 7.89
- Other financial corporations
  - accrued interest, 2.121, Annex 2.1
  - balance-sheet data, 7.35–7.38, 8.133
  - balance-sheet periodicity, 2.36, 2.38
  - claims on, Box 7.4
  - consolidation of data, 7.51, Annex 7.2
  - data reporting, 7.13–7.17
  - differences between the *1993 SNA* methodology and the *Guide*, 1.10
  - Form 4SR, 7.58, Appendix II
  - other changes in the volume of assets, Annex 7.1
  - pension funds, 3.117
  - stock and flow data, 5.1
  - subsectors, 3.96–3.131
- Other Financial Corporations Survey*, 2.20, 2.97, Annex 7.3
- Other financial intermediaries
  - accrued interest, 2.121
  - differences between the *1993 SNA* methodology and the *Guide*, 1.10
  - subsectors, 3.97–3.108
  - valuation changes, 2.127, Annex 2.2
- Other flows matrix, 8.41
- Other items (net), 7.41, 7.50, 8.115
- Other nonfinancial corporations
  - differences between the *1993 SNA* methodology and the *Guide*, 1.10
  - subsectors, 3.141–3.146
- Other resident sectors
  - claims on, Box 7.4
  - differences between the *1993 SNA* methodology and the *Guide*, 1.10
  - time series presentation, 8.52–8.54
- Other sectors
  - claims on, Box 7.4
- Other volume changes in financial assets and liabilities
  - not elsewhere classified, 7.27
- Other volume changes in nonfinancial assets not elsewhere classified, 7.27
- Out-of-the-money call (put) options, 4.83, 5.279
- Outstanding principal
  - defined, 2.46
- Over-the-counter markets, 5.54
- Over-the-counter options, 4.83, 7.89
- Overdrafts, 4.3
- Own acceptances, 4.35
- Own assets, 4.56
- Own funds at book value method, 1.14, 5.190
- Parsimony in seasonal adjustment, 6.82
- Partial data reporting, 8.84–8.87
- Partially privatized corporations, 3.140
- Pass-through securities, 4.14, 4.29–4.25, 5.83–5.84
- Pawnshops, 3.105
- Pay-as-you-go schemes, 3.118
- Peace-keeping missions, 3.51
- Pension auxiliaries
  - function of, 3.124
- Pension funds
  - autonomous, 3.116, 3.188, 4.57
  - differences between the *1993 SNA* methodology and the *Guide*, 1.10
  - function of, 3.113
  - holding corporation classification, 3.107
  - of international organizations, 3.29
  - multi-employer plans, 4.57n
  - net equity of households in, 4.68–4.70, 5.194, 5.199–5.204
  - non-autonomous, 3.116, 4.57
  - residency, 3.29
  - unfunded schemes, 4.59
  - valuation changes, 2.128, Annex 2.2
- Pension plans
  - assets, 4.57
  - classification of, 3.114
  - funded, 3.115–3.116
  - unfunded, 3.115

- Percentage-movement rule, 2.118
- Perpetuities, 5.65
- Placement fees, 5.320
- Plan of accounts, 2.4, 2.69
- Plausibility testing, 2.112–2.118, 8.209
- Plowback ratio, 5.178
- POP. *See* Put-option payoff
- Portfolio investment, 8.149
- POs. *See* Principal-only claims
- Position limits, 4.84
- Post office giro institutions, 3.89
- Pre-tax effective yield, 5.58
- Preferred stocks/shares, 4.41, 5.80–5.82
- Premium supplements, 4.55n
- Prepayment of insurance premiums, 4.71–4.74, 4.95, 5.205–5.206, Box 2.2
- Prepayment risks, 4.21
- Present-value method, 1.14, 5.60, 5.171–5.187
- Present value of growth opportunities, 5.181–5.182
- Primary-market purchase data, 8.183
- Principal
  - deposit, 2.47
  - financial derivatives valuation, 2.50
  - indexation, 5.71
  - notional, 2.50
  - original, 2.46
  - outstanding, 2.46
  - remaining, 2.46
- Principal arrears, 5.144
- Principal-only claims, 4.22–4.23
- Principal-only securities, 5.85
- Private banks, 3.61
- Private equity, 3.101
- Private sector, 8.100
- Privatized corporations, 3.140
- Producer units, 3.193
- Profit-or-loss accounts
  - gain or loss data, 2.81
- Profit transfer, 5.10
- Projected Unit Credit Method, 5.201
- Proportional estimation method, 8.197
- Proprietary PSA-type model, 5.83
- Proprietor's net additions, 4.43, 5.156
- Provisions for loan losses, 4.116
- Provisions for losses on impaired assets, 1.27, 2.43, 2.86, 4.111, 4.114, 5.10
- Provisions—liabilities, 5.293
- PSA model. *See* Public Securities Association model
- Public exchanges
  - function of, 3.120
- Public goods, 3.152
- Public nonfinancial corporations
  - claims on, Box 7.4
  - deposits issued by, 6.36–6.37
  - differences between the *1993 SNA* methodology and the *Guide*, 1.10
  - subsectors, 3.134–3.140
- Public-private partnerships, 3.171
- Public Securities Association model, 5.83
- Publicly traded entities
  - interim financial reports, 2.35
- Purchaser of a long position, 5.229
- Put-option payoff, 5.283
- Put options, 4.83, 5.71
- PVGO. *See* Present value of growth opportunities
- Qualifying insurance policy, 4.69
- Quasi-corporations
  - description of, 3.10
  - proprietor's net additions to the equity of, 4.43, 5.156
- Quota subscription, 4.98, 4.107
- Quoted shares, 7.89
- Range-floater notes, 5.275n
- Rate of return on equity, 5.178–5.179
- RCBs. *See* Regional central banks
- Real estate investment trusts, 4.45
- Receivables
  - classification of, Box 2.3
- Receivers, 3.93
- Redeemable margin deposits, 4.6–4.7
- Redemption value, 2.49
- Reference rate, 5.66
- Regional central banks
  - currency unions and, Box 3.2
  - differences between the *1993 SNA* methodology and the *Guide*, 1.10
  - headquarters office, 3.53, 3.72
  - national offices of, 3.40–3.41, 3.53
  - residency, 3.40–3.41, 3.53
- Regional governments, 3.175–3.176
- Regional units, 3.176
- Regression estimation method, 8.203
- Regular way contracts, 5.304
- Regulatory bodies, 3.128
- Rehabilitate-operate-transfer schemes, 3.171n
- Reinsurance, 4.65–4.67
- Reinsurance corporations
  - differences between the *1993 SNA* methodology and the *Guide*, 1.10
  - function of, 3.109, 3.112
- REITs. *See* Real estate investment trusts
- Remaining maturity, 5.56n, 7.88
- Remaining principal
  - defined, 2.46
- Remeasurement, 2.43
- Reorganizations, 3.93, 6.39–6.46
- Repayable margin deposits, 4.6–4.7, 5.233
- Replicating portfolio, 5.267n
- Repurchase agreements, 4.129, 5.137–5.142
- Required reserves, 6.89, 6.91
- Resale transactions, 5.278n
- Research and development institutes, 3.163
- Reservable liabilities, 6.89, 6.91



- Reserve assets, 4.56, 8.152
- Reserve banks, 3.64
- Reserve-computation date, 6.91
- Reserve-computation period, 6.89
- Reserve deposits, 6.53
- Reserve-maintenance period, 6.89, 6.91
- Reserve position in the Fund, 7.62–7.63
- Reserve requirements
  - with averaging of reserve holdings, 6.89–6.90
  - without averaging of reserve holdings, 6.91–6.92
- Reserve settlement, 6.89, 6.91
- Reserves against outstanding claims, 4.75–4.76, 5.207, Box 2.2
- Reset period, 5.66
- Residence
  - of institutional units, 3.2
- Residency
  - center of economic interest, 3.16
  - concept and coverage of, 3.16–3.18
  - euro-area-wide, 7.65
  - national, 7.65
- Resident sectors
  - claims on, 7.44, Box 7.4
  - liabilities to, 7.45–7.54, Box 7.5
- Resident units, 3.19–3.41
- Residual calculations, 8.63–8.65
- Rest of the world, 8.17, 8.21, 8.100
- Results for the period, 2.83, 4.51
- Retained earnings
  - defined, 2.83, 4.51
  - financial asset valuation, 2.65–2.67
  - transfer of profit or loss, Box 2.6, 5.10
- Retirement benefits, 3.113. *See also* Pension funds
- Revaluation accounts, 2.21, 8.4, 8.23, 8.30–8.31, 8.186–8.189
- Revaluation adjustments, 2.67
- Revaluations, 2.43, 2.63, 2.82, 5.19–5.33. *See also* Valuation
- Reversal of provisions, 5.128
- Reverse floating-rate bonds, 5.66n
- Reversing trades, 4.82
- Right issues, 4.84
- Risk-free rate of interest, 5.218
- ROE. *See* Rate of return on equity
- Rural banks, 3.85
  
- Sale and lease back, 5.134
- Salvage administrators, 3.124
- Savings and loans associations, 3.83
- Savings deposits, 6.37
- Savings systems, 6.37
- SDRs. *See* Special drawing rights
- Seasonal adjustment
  - broad money, 6.55
  - decomposition of an economic time series, 6.85–6.87
  - direct methods, 6.67–6.72
  - economic time series, 6.64–6.66
  - indirect methods, 6.67–6.72
  - revision policy, 6.88
  - software packages, 6.73–6.84
  - three-component model in multiplicative form, Box 6.7
- Seasonal components, 6.85
- Seasonal workers, 3.23
- SEATS program, 6.73–6.74
- Secondary loan market, 4.27
- Secondary-market-trading annuities, 4.38
- Secondary market transactions, 8.183–8.185
- Sector tables, 8.52–8.55
- Sectoral balance sheets, 1.29, 2.20, 2.79, 5.1, 7.2, 7.18–7.38, 7.51, Appendix I
- Sectorization
  - of the economy, 3.54
  - of financial assets and liabilities, 2.26
  - of institutional units, 3.54–3.55
- Sectors
  - differences between the 1993 SNA methodology and the *Guide*, 1.10
  - institutional units and, 3.1
- Securities
  - fixed-rate, 7.89
  - long-term, 7.89
  - short-term, 7.89
  - substituted for No. 1 Account obligations, 5.49n
  - variable-rate, 7.89
  - write-offs, 5.10
- Securities brokers, 3.103
- Securities depository companies, 3.120
- Securities-driven repurchase agreements, 5.140n
- Securities lending, 5.137–5.142
- Securities lending agreement, 5.140n
- Securities markets
  - function of, 3.120
- Securities other than shares
  - accrued interest accounts, 2.119, 2.121–2.122
  - accrued interest calculations, 5.92–5.108
  - accrued interest reporting, 5.109–5.112
  - asset-backed, 4.14, 4.19–4.25
  - bearer-type securities, 5.113–5.118
  - classification of, 1.11
  - disaggregation, 7.89–7.90
  - embedded derivatives, 4.14, 4.16–4.18, 5.71–5.79
  - excluded from broad money, 2.119
  - fair values for infrequently traded securities, 5.54–5.64
  - general principles, 5.51–5.53
  - IMF securities, 4.10
  - impaired securities, 5.87–5.91
  - mortgage pass-through securities, 5.83–5.84
  - pass-throughs, 4.14, 4.19–4.25
  - perpetuities, 5.65
  - preferred stocks/shares, 5.80–5.82
  - price indices, 8.162
  - stripped securities, 5.85–5.86

- traded in international markets, 4.15
- types of, 4.14–4.15
- variable-rate bonds, 5.66–5.70
- Securities ownership survey, 5.118
- Securitization
  - of assets, 3.106, 3.170, 4.19
  - trusts established for, 3.131
- Securitized debt instruments, 4.25
- Seller of a futures contract, 5.229
- Settlement accounts, 4.98, 4.100–4.102, 4.111, 4.113
- Settlement date accounting, 5.300–5.309, 5.349–5.359
- Settlement dates, 4.100
- Settlements, 4.82, 5.282
- Share price indices, 8.161
- Shares and other equity accounts
  - classification of, 1.11, 4.41–4.51
  - depository receipts, 5.158–5.159
  - differences between the 1993 SNA methodology and the *Guide*, 1.12
  - fair values of infrequently traded or nontraded shares, 5.163–5.165
  - general principles, 5.152–5.157
  - investment pools, 5.160–5.162, 7.89
  - liability account for the monetary statistics, 4.49–4.51, 5.191–5.192
  - market value, 7.32
  - net asset value, 5.170
  - own funds at book value, 5.190
  - quoted, 7.89
  - share price indices, 8.161
  - stock and flow data, 2.86, Box 2.6
  - time series presentation, 8.57–8.58
  - transactions, 2.84
  - valuation of
    - combined approach, 5.118–5.119
    - market capitalization method, 5.116–5.119
    - net asset value, 5.170
    - present-value approach, 5.171–5.187
- Short forward contracts, 5.220, 5.222, 5.224
- Short-term instruments
  - classification of, 1.11
- Sight drafts, 4.33
- Similar corporations, 5.166
- Single-party states, 3.169
- Site offices
  - residency, 3.34–3.35
- Sliding level estimation method, 8.193, 8.199
- Smoothing estimation method, 8.198
- SNA. *See System of National Accounts 1993*
- SNA integrated financial account, 8.122–8.166
- Social benefits, 3.184
- Social entities, 3.7
- Social insurance, 4.52–4.53
- Social protection schemes, 3.184
- Social risks, 3.184
- Social security contributions, 3.186
- Social security funds, 3.184–3.188
- Software
  - seasonal adjustment packages, 6.73–6.84
- Solicitor nominee companies, 3.130
- Source data, 8.66–8.79
- Special agencies, 3.166
- Special Data Dissemination Standard, 7.68
- Special drawing rights
  - allocations, 4.51
  - classification of, 1.11
  - exchange rate, 5.39
  - flows, 5.40
  - transactions, 5.17
- Special purpose entities
  - balance sheets, 8.180–8.182
  - classification of, 3.149–3.151
  - established outside economic territory location of parent corporation, 3.151
  - function of, 3.9, 3.106, 3.170–3.174
  - legal ownership transfer, 3.173
  - residency, 3.37
  - sharing of risks and returns, 3.173
  - structured financial arrangements, 3.173
- Special purpose vehicles, 3.106, 4.24n
- Special reserves, 2.86
- Specialized financial intermediaries, 3.105
- Specific provisions, 5.147
- Spectral analysis, 6.81n
- SPEs. *See* Special purpose entities
- SPIs. *See* Share price indices
- Spot price, 5.218
- SRFs. *See* Standardized report forms
- Stand-alone derivatives, 4.16
- Standard setting agencies, 3.163
- Standardized report forms, 1.6, 7.58–7.65, Appendix II
- Standing Interpretation Committee, 2.13
- State governments, 3.175–3.178, Box 7.4
- State-sponsored pension systems, 3.118
- Statistical adjustment items, 8.29
- Statistical Code of Practice*, 2.87
- Statistical discrepancies, 8.79, 8.115, 8.204–8.207, 8.211–8.214
- Statistical reporting
  - benefit assessment, 2.94–2.96
  - compliance costs, 2.91–2.93, 2.96
  - regulations, 2.87
  - requirements, 2.90–2.91
- Stock dividends, 4.84, 5.155
- Stock positions matrix, 8.40
- Stock splits, 4.84, 5.155
- Stocks and flows
  - adding-up requirements, 5.3–5.6
  - by asset classification, 5.34–5.36
  - closing stocks, 5.4, 5.7
  - data sources, 5.2
  - deposits, 5.48–5.50
  - estimation of changes from exchange rate movements, 5.22–5.33

- financial derivatives, 5.208–5.289
- foreign currency, 5.43–5.47
- insurance technical reserves, 5.193–5.207
- loans, 5.119–5.151
- monetary gold, 5.37–5.38
- national currency, 5.41–5.42
- nonfinancial assets, 5.294–5.299
- opening stocks, 5.4, 5.7
- other accounts receivable/payable, 5.290–5.293
- other changes in the volume of assets, 5.3, 5.8–5.12
- securities other than shares, 5.51–5.118
- shares and other equity, 5.152–5.192
- special drawing rights, 5.39–5.40
- transactions, 5.3, 5.13–5.18, 5.22–5.33
- valuation changes, 5.3, 5.19–5.33
- Storage costs, 5.221n
- Store of value, 6.12
- Strike price, 5.83n
- Stripped securities, 5.85–5.86
- Structured notes, 5.275n
- Students
  - residency, 3.47
- Subsidiaries, 3.9, 3.30
- Subsidiary ledgers, 2.4, 2.68–2.69, 2.79–2.81
- Substitution estimation method, 8.200
- Supervisory agencies, 3.128
- Supplement to International Financial Statistics*, 7.73
- Supplementary data, 1.31, 7.74–7.77, 7.85–7.90, 8.146
- Supplementary source data, 8.74–8.75
- Surveys. *See also specific surveys*
  - for financial corporations sector, 1.29, 7.3, 7.39–7.54, 7.83, Box 7.4, Box 7.5
- Suspense accounts, 4.110, 4.117
- Swap agreements, 4.81–4.82
- Swap contracts, 7.89
- Swaptions, 5.274
- System of National Accounts 1993*
  - accrued interest, 2.30
  - relationship to the *Guide*, 1.8–1.14
- Tax-favored individual retirement plans, 3.118
- Taxes
  - deferred tax assets, 4.110
  - deferred tax liabilities, 4.117
  - earmarked, 3.154
- Technical assistance personnel
  - residency, 3.26
- Teller's checks, 4.5
- Term life insurance, 4.72n
- Term-structure models, 5.275
- Term to maturity, 7.76
- Terminology, 2.42–2.50
- Time drafts, 4.33
- Time of recording, 5.300–5.309
- Time proportion basis, 5.123
- Time-series presentations, 8.51–8.58
- Time value, 5.280
- Timeliness, 2.26, 2.34–2.41
- To/from zero rule, 2.118
- Top-slicing, 2.100
- Total return swaps, 4.92
- Trade bills, 4.33–4.35
- Trade credit and advances
  - classification of, 1.11, 4.94–4.95
  - defined, 5.290–5.292
- Trade-credit arrears, 4.95
- Trade date accounting, 5.300–5.309, 5.349–5.359
- Trade dates, 4.100
- Trade receivables, 3.98
- Trading-day effects, 6.85
- TRAMO program, 6.73–6.74
- Transaction costs, 5.310–5.319
- Transactions, 2.84, 5.3, 5.13–5.19, 5.22–5.33
- Transactions estimation, 5.338–5.348
- Transactions matrix, 8.38–8.39
- Transfer payments, 3.184
- Transferable deposits, 2.119, 2.121–2.122, 4.2, 4.4, 4.122
- Transfers, 3.152, 3.156, 5.10
- Traveler's check companies, 3.88
- Treasury shares, 4.42, 5.154
- Trend-cycle components, 6.85
- Trend estimation method, 8.201
- Trial balance, 2.74
- Truncated reporting, 2.100, 2.102–2.103
- Trusts
  - function of, 3.9, 3.131
  - organized in foreign countries, 3.131
  - special purpose entities, 3.106
- Unallocated gold deposits
  - classification of, 4.8–4.9
  - differences between the *1993 SNA methodology and the Guide*, 1.14
- Uncompensated seizures, 7.27
- Underwriters, 3.103
- Unexercised options, 5.279
- Unfunded pension liabilities, 1.14
- Unfunded pension schemes, 4.59
- Unincorporated entities, 3.146–3.147
- Unit trusts, 3.102
- Universal reporting, 2.99
- Universities, 3.168
- Unlisted corporations, 2.3
- Unquoted equity shares
  - differences between the *1993 SNA methodology and the Guide*, 1.14
- Unquoted shares, 5.164–5.165, 5.170
- User costs, 6.61
- Validation of data reporting, 2.112–2.118
- Valuation
  - adjustments, 2.65–2.67, 2.77n, 2.84, 2.124, 4.51, 7.49
  - changes, 2.63, 2.81–2.85, 2.123–2.128, 5.3, 5.19–5.33, 8.65

- financial assets, 2.51–2.67, Box 2.2, Box 2.3
- gains and losses, 2.61
- going concerns, 2.33
- hedging relationships, 2.60–2.62
- Valuation change estimation, 5.338–5.348
- Value of the firm, 5.173
- Variable-coupon bonds, 5.66
- Variable-rate bonds, 5.66–5.70, 5.101–5.102
- Variable-rate loans, 7.89–7.90
- Variable-rate securities, 5.66n, 7.89
- Variation margin, 5.235
- Venture capital, 3.101, 3.105
- Vertical adding-up requirements, 5.3
- Vertical checks, 5.3
- Vessels
  - crew member residency, 3.28
- Vesting date, 5.287
- Vostro account, 4.2
- Warrants, 4.16
- Weather derivatives, 4.78, 4.91–4.93
- Weighted-average cost of capital, 5.90
- Write-offs, 5.10
- X-12-ARIMA program, 6.73–6.84, 6.86–6.87, Box 6.5, Box 6.6, Box 6.7
- X-11 Seasonal Adjustment Program, 6.75–6.78, 6.86
- Yield to maturity, 5.58
- Zero coupon basis securities, 4.14
- Zero-coupon rate, 5.249
- Zero coupon securities, 5.213
- Zero-coupon yield curve, 5.61
- Zero-interest deposits, 4.124
- Zero-interest trade credit of longer maturity, 5.292
- Zero-sum matrix, 8.102

Monetary and Financial Statistics  
Compilation Guide

