

## Chapter Eleven

### Compilation of FSI Data: Practical Issues

#### Introduction

11.1 The previous chapter discussed strategic and managerial issues that arise in the compilation and dissemination of FSI data. This chapter focuses on practical considerations.

11.2 At the outset, it is worth noting that practical experience in compiling FSI data is still relatively limited and experience will be gained as the compilation and calculation of FSIs gathers momentum. In this context, this chapter focuses on the basic data sources that can be employed in calculating FSI ratios, as well as other data series required to meet the *Guide*'s requirements. The focus is on FSI ratios derived from financial statements. Data sources for the FSIs covering financial and real estate markets are discussed in Chapters 8 and 9, respectively.

11.3 It is likely that existing data sources for deposit-takers can meet many of the data requirements for compiling FSIs. This may be particularly true for domestically-controlled cross-border consolidated data, whose source is information available to supervisors (see paragraph 11.8). The compiler should thus see the extent to which existing data sources, including possible adaptations, can meet the requirements of the *Guide* before investigating the possibility of collecting new data series. In determining the need to collect new data, and hence to incur increased cost, authorities must make a judgment as to the likely impact and importance of the additional data series for compiling FSI data. For instance, where an additional series would have an insignificant impact on an FSI ratio, the case for collecting such data would not be strong.

#### Basic data sources

##### *Deposit-takers*

11.4 There are typically two main official sources of information available for compiling FSIs on deposit-takers. They are (1) commercial accounting/supervisory data, and (2) national accounts data, including monetary statistics (see Box 11.1).<sup>249</sup> For the geographic distribution of loans, data on cross-border exposures published by the BIS can be utilized.<sup>250</sup> In addition, there are private sources of data that provide information derived from published financial statements.<sup>251</sup>

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<sup>249</sup> In many economies, credit registers can provide a wealth of information on loans and other forms of credit advanced by deposit-takers.

<sup>250</sup> Information on the coverage of BIS data is available in BIS (2003b).

<sup>251</sup> A discussion of using such databases is provided in Bhattacharya (2003).

11.5 There are important differences between national accounts and commercial accounting data, arising from the different purposes for which data are compiled. In terms of scope, commercial accounting statements for deposit-takers consolidate activities of subsidiaries with the parent in order to evaluate the performance of the entire group. In contrast, national accounts data include only the flows and positions of deposit-takers located in the domestic economy, reflecting the focus of the data on macroeconomic developments in the domestic economy. Therefore, whereas commercial accounting data and supervisory data eliminate intra-group transactions, national accounts data are based on those reported for each individual deposit-taker within a group, without netting out transactions and positions with other group members. Another important difference between the data sources is that national accounts data are collected on the basis that the information will be aggregated to compile data for the sector as a whole,<sup>252</sup> unlike commercial accounting and supervisory data that have been designed for the reporting of the activity of individual units.

11.6 In summary, national accounts data are more suited to monitoring developments in the domestic economy on an aggregate basis,<sup>253</sup> while commercial and supervisory data are more suited to monitoring developments of deposit-taking groups on a cross-border consolidated basis.

#### *Commercial and supervisory data*

11.7 Balance sheet as well as income and expense data are usually collected by supervisory agencies as an essential element of their supervisory function. Because typically the collection has a statutory basis, these data may be more reliable than those collected for statistical purposes in economies with weak statistical systems. However, while there are internationally agreed supervisory requirements, the methods by which these are implemented vary by country. Moreover, the accounting standards that supervisors regard as a basis for relevant and reliable measures of income and expense and balance sheet items, as well as of capital adequacy, are currently varying across countries, even though the International Accounting Standards Board is working toward common international standards.

11.8 In some countries, data might be collected for supervisory purposes on standardized forms with clear and specific instructions on how and when they should be completed. In other countries, supervisory and national accounts data are collected together on returns that are organized and structured in a single framework, and additional series are collected for supervisory or national accounts purposes as needed. Such reporting approaches might lend themselves to providing data that can be aggregated for FSI purposes. Alternatively, in some

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<sup>252</sup> Not all institutions in the population may report each period for national accounts purposes. For instance, the smallest institutions may report less frequently than other reporters. For periods when some institutions do not report, the aggregated reported data are typically “grossed up” to take account of the “missing” reporting entities.

<sup>253</sup> As noted in Chapter 5, the *MFSM* eliminates intra-deposit-takers positions in the depository corporations’ survey.

countries, supervisors collect data that are separate from national accounts data and are customized to individual institutions, both with respect to content and the reference date for the reports. In such instances, to compile FSIs the *Guide* encourages movement toward greater consistency of approaches, whenever feasible.

11.9 Table 11.8 at the end of this chapter reconciles the income and expense and balance sheet items in Table 4.1 with the relevant international accounting standards in order to illustrate how commercial accounting data might be utilized to meet the *Guide*'s requirements. However, this table should be regarded as a broad guide, and the reader is advised to consult Appendix IV for more details. Data series that might not be available from regulatory or commercial accounting sources, but might be needed for the compilation of FSIs are highlighted below.

#### *National accounts data*

11.10 Balance sheet data are usually collected from resident deposit-takers by the central bank on a monthly basis to produce monetary aggregates. Moreover, while not normally collected as part of the data for compiling monetary statistics, income data might well be collected on a quarterly basis for use, along with the monthly balance sheet data, in the compilation of national accounts data.

11.11 Table 11.8 at the end of this chapter reconciles the income and expense and balance sheet items in Table 4.1 with those in the *1993 SNA*, illustrating how national accounts data can be used to meet the *Guide*'s requirements. However, Table 11.8 should be regarded as a broad guide, and the reader is advised to consult Appendix IV for more details. Series not covered by national accounts data, but which might be needed for the compilation of FSIs, are highlighted below.

#### ***Other financial corporations***

11.12 Official data collection on the activities of other financial corporations has traditionally lagged that for the activities of deposit-takers both in terms of its scope and frequency. However, the increasing importance of other financial corporations in financial systems has produced a trend toward increased data collection. Central banks and/or national statistical offices might already be collecting information on other financial corporations. Alternatively, it might be necessary to rely initially on information provided in the published accounts of other financial corporations until official data sources are developed.

#### ***Nonfinancial corporations and households***

11.13 The agency responsible for compiling national accounts statistics is likely to collect data on the nonfinancial corporations and household sectors. To meet the data needs for compiling the encouraged list of FSIs, additional data series will need to be developed, such as debt service payments, and other data that are not specified in the *1993 SNA* framework. While national accounts data are usually the source of official information on the household sector, in the case of the nonfinancial corporations sector published accounts are an important alternative source of information. Typically, economic statistics for nonfinancial corporations

are based on representative sample surveys or tax records. Tables 11.9 and 11.10 provide a reconciliation of the data needs of the *Guide* with the 1993 SNA framework and IASs, respectively.

11.14 Obtaining data on the household sector is difficult. If the agency calculating FSIs is different from the one that compiles national accounts data on the household sector, coordination between the two agencies would be essential.

11.15 While the household sector is likely to borrow from resident financial corporations, with modern forms of communication and the ability to advertise products across borders, borrowing from abroad might become more prevalent. Thus, there may be a need to capture cross-border borrowing activity of households. Some countries set up specific procedures to capture cross-border assets and liabilities of residents with nonresident financial corporations. Under these procedures, all households are obliged to report such positions to the central bank on a regular basis (monthly, quarterly, or annually). However, transactions settled through these accounts abroad are to be reported by households, with the frequency and detail of individual reporting dependent on the scale of the activity undertaken.

11.16 The additional data series on debt service that are required could be included in household surveys of expenditures, income, and financial assets and liabilities. Alternatively, available information on outstanding household debt and interest rates could be used together with some assumptions about possible repayment schedules, perhaps based on remaining maturities data for loan debt and minimum payment amounts for credit card debt, to provide some estimates for debt service.<sup>254</sup> While some approximations may be rough, by using the same methods and data series over time and taking into account market developments, important changes over time can be captured.

## **Other data requirements**

### ***Deposit-takers***

11.17 While data from available sources can serve as a basis, other information might be needed to meet the data series requirements of the *Guide* to enable the consolidation and aggregation of data. As can be seen from the tables ahead, considerably fewer additional data series might be needed to compile the data required by the *Guide* if the sources are commercial accounting and supervisory sources rather than national accounts sources. This is because many of the concepts underlying the list of FSIs for deposit-takers are supervisory in nature, including the framework for compiling data on a consolidated group basis.<sup>255</sup>

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<sup>254</sup> For one possible approach, taken by the U.S. Federal Reserve Board, see United States Board of Governors of the Federal Reserve System (2004).

<sup>255</sup> In the *Guide*, a group is defined as the parent deposit-taker, its deposit-taking branches, and deposit-taking subsidiaries. A similar approach is followed in the case of the other financial and nonfinancial corporations sectors.

11.18 As noted above, in determining the need to collect new data, and hence to incur an increased resource cost, the *Guide* recommends that the authorities make a judgment as to the likely impact and importance of the additional data series for compiling FSI data.

#### *Domestic consolidated data*

11.19 The additional data series for deposit-takers that might be required are shown in Tables 11.1 to 11.3. These tables are based on an assessment of what information could be available from national accounts sources compared with the *Guide*'s requirements. These tables assume that data are collected on the same basis as for national accounts data—that is, on an institutional unit basis.

11.20 Table 11.1 shows those series that are not covered in national accounts data, but are needed to calculate the agreed indicators. Table 11.2 covers those series needed for the aggregation of data at the sector-level, and Table 11.3 covers those series needed to present data on a consolidated basis rather than on a separately incorporated entity basis.

#### Series not covered in national accounts methodology

11.21 Table 11.1 presents those series that, along with those available from the national accounts, allow the compilation of the agreed indicators for deposit-takers. Set out below are brief explanations why these data series are required and information on their possible sources. Only those series required to calculate an agreed indicator are shown in the table. Appendix III discusses some additional series that might be relevant, depending upon country circumstances.

#### Income and expense series

11.22 *Provisions.* Data on provisions are essential for understanding the soundness of a deposit-taker, because of the impact of loan and other potential losses on profits and capital. Data on provisions are not among the 1993 SNA data series, but may be collected for supervisory purposes.

11.23 *Gains and losses on financial instruments, gains on sale of fixed assets, and extraordinary items.* Data on gains and losses on financial instruments are an integral element of profitability. They are directly required for the calculation of one indicator and are indirectly required for the calculation of several others. As explained in Appendix IV, data on gains and losses on financial instruments are potentially available from the revaluation account of the 1993 SNA, but at the present time collection of these data is relatively limited. Similar reasoning applies to the data on extraordinary items. Gains from the sale of fixed assets, such as property used for branch operations, affect profits but are not identifiable from 1993 SNA data. Data on gains or losses in a given period are required because they are included in net income for the period.

11.24 *Gains or losses from the sale of a subsidiary or associate.* The *Guide* recommends that such gains or losses (including those on reverse investments) be excluded from income. In the national accounts, such gains or losses are classified as a valuation change if a corporation or quasi-corporation is sold. Therefore, if data on gains and losses on financial

instruments are sourced from the revaluation account of the *1993 SNA*, data on gains and losses from the sale of subsidiaries and associates need to be excluded. Moreover, this latter series may be of analytical interest in its own right.

#### Balance-sheet-related series

11.25 *Liquid assets*. Data on liquid assets are used to calculate two indicators. While monetary statistics provide some data, such as deposits at the central bank, the liquid-asset concepts developed in the *Guide* are not available in national accounts data.

11.26 *Short-term liabilities*. While data on short-term liabilities are available on an original maturity basis from national accounts data sources, the preference in the *Guide* is for data on a remaining maturity basis. This is because the indicator for which this series is required is a measure of liquidity, comparing short-term liabilities with liquid assets.

11.27 *Nonperforming loans*. As with provisions, data on nonperforming loans are essential for understanding the financial soundness of the deposit-taking sector and are required for the calculation of two indicators. However, such data are not contained in national accounts data, but may be collected for supervisory purposes.

**Table 11.1. Deposit-Takers—Series not Covered in National Accounts Methodology:  
Domestic Deposit-Takers**

<i>Income and expense</i>		
Provisions		
<i>Accrued interest on nonperforming assets</i>	Required	
<i>Loan loss provision</i>	Required	
<i>Other financial asset provisions</i>	Required	
Gains and losses on financial instruments	Required	
Gains and losses on the sale of an associate or subsidiary <sup>1/</sup>	Required <sup>2/</sup>	
Gains and losses on sale of fixed assets in the period <sup>1/</sup>	Required	
Extraordinary items	Required	
<i>Balance-sheet-related</i>		
Liquid assets		
<i>Core</i>	Required	
<i>Broad</i>	Required	
Short-term liabilities (remaining maturity)	Required	
Nonperforming loan assets	Required	
Provisions		
<i>Accrued interest on nonperforming loans<sup>3/</sup></i>	Required	
<i>Specific loan provisions</i>	Required	
<i>Other specific provisions</i>	Required <sup>4/</sup>	
Foreign-currency-denominated		
<i>Loan assets</i>	Required	
<i>Liabilities</i>	Required	
Foreign-currency-linked		
<i>Loan assets</i>	Required	
<i>Liabilities</i>	Required	
Real estate loan assets		
<i>Residential</i>	Required	
<i>Commercial</i>	Required	
Large exposures		
<i>Number of large exposures</i>	Required	
<i>Exposures to largest entities in the economy</i>	Required	
<i>Exposures to affiliated entities and other connected entities<sup>5/</sup></i>	Required	
Net open position in foreign currency	Required	
Net open position in equities	Required	
	<b><i>Subsidiaries<sup>8/</sup></i></b>	<b><i>Associates<sup>8/</sup></i></b>
Shares and other equity <sup>6/</sup>	Required	Required
Shares and other equity <sup>7/</sup>	Required	Required
Pro-rated share of retained earnings (income)	Required	Required
Purchased goodwill	Required	Required

- 1/ Measured as the difference between the sale value and the balance sheet value at the previous end-period.
  - 2/ Depending on the source of information on gains and losses on financial instruments (see paragraph 11.24).
  - 3/ This item is required if gross loan data are only available on a basis that includes accrued interest on nonperforming loans. If other assets are also recorded inclusive of accrued interest on nonperforming assets, then additional data on accrued interest for such nonperforming assets will be required.
  - 4/ To be identified by type of instrument.
  - 5/ These cover exposures to other group entities and associates of the reporting entity, to directors and other employees, and to shareholders or owners of the deposit-taker.
  - 6/ Valued as the proportionate share of the parent deposit-taker's stake in the capital and reserves of subsidiaries and associates.
  - 7/ As valued on the balance sheet if different from the previous line.
  - 8/ Including reverse equity investments of subsidiaries and associates in their parent companies. The data for subsidiaries and associates could be provided in one aggregate figure, that is separate identification is not essential.
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11.28 *Provisions.* Data on the outstanding position of specific loan provisions are required to calculate the data series *nonperforming loans net of provisions* that is used to calculate one indicator, and to adjust the value of outstanding loans for specific provisions. Information on provisions for the accrual of interest on nonperforming loans is required if data on gross loans (and the sectoral breakdown) are only available inclusive of the accrual of such interest—that is, consistent with the *1993 SNA*. Other specific provisions relate to the outstanding level of specific provisions for other financial assets. Such provisions reduce the value of these assets in the balance sheet and should be separately identified in the same manner as specific provisions for loans. Moreover, the outstanding amounts for specific provisions, and provisions for accrued interest on nonperforming loans, need to be excluded from capital and reserves for data sourced from national accounts information. Data on provisions are not among the *1993 SNA* data series,<sup>256</sup> but may be collected for supervisory purposes.

11.29 *Foreign currency loans and liabilities.* Positions in foreign currency raise the potential of vulnerability to exchange rate movements. Two indicators are used to measure this vulnerability. While some national accounts methodologies, in particular the monetary and external debt methodologies, encourage the collection of data on foreign currency positions, and could be extended to cover the data required here, the coverage in the *Guide* differs from both. The data for foreign-currency-denominated and foreign-currency-linked loans could be collected as a single series, and similarly for liabilities.

11.30 *Residential and commercial real estate loans.* Experience suggests that exposure to the real estate market can be a source of risk to the deposit-taking sector, and is reflected in two indicators. The loan data required in the national accounts methodology does not include the separate identification of data on residential and commercial real estate loans, but such loan data could be collected at a more disaggregated level. The International Standard Industrial Classification identifies real estate at the sub-category level (see Box 1 in

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<sup>256</sup> The *MFSM* indistinguishably includes provisions as a liability item under other accounts receivable/payable but encourages separate identification of expected loan losses (paragraph 390).



Appendix III). Commercial real estate lending among deposit-takers in the reporting population that are part of the same group should be excluded from the data. As noted in Chapter 6, if available, data on household debt collateralized by real estate could be employed instead of data on residential real estate loans.

11.31 *Large exposures.* Data on large exposures are required to calculate one indicator. Such data are not required for national accounts purposes, but the number of large exposures of deposit-takers that are identified under the national supervisory regime should be available to bank supervisors. Data on connected borrowers might also be available from supervisory sources. However, the *Guide*'s other definition of large exposures, that is, those to the largest entities in other sectors, may not be the same as that used for supervisory purposes. Exposures to deposit-takers in the reporting population that are part of the same group should be excluded from the data.

11.32 *Net open positions.* Net open positions in equities and foreign exchange are included in the list of FSIs. Such information may be collected and monitored by supervisors.

11.33 *Shares and other equity, and pro-rated share of retained earnings.* The *Guide* recommends that, for all sectors (1) investments in subsidiaries and associates are valued in the balance sheet on the basis of the pro-rated share of the value of these entities' capital and reserves, and (2) the pro-rated share of earnings is included in income. This approach is also recommended for the so-called reverse equity investments—that is, if an associate or subsidiary takes an equity stake in its parent. This is not the approach taken for domestic subsidiaries and associates in the national accounts data.<sup>257</sup> So for all corporations, additional data are required to adjust the balance sheet, and particularly capital and reserves, and income data derived from national accounts data.<sup>258</sup> Any difference between the reported balance sheet value of the equity investments in subsidiaries and associates and the proportionate share should increase (if the latter is greater than the former) or reduce (if the former is greater than the latter) capital and reserves, with the adjustment attributed to the valuation adjustment.

11.34 *Goodwill.* The *Guide* recommends that data on goodwill be deducted from nonfinancial assets and from capital and reserves. National accounts data include goodwill in nonfinancial assets and, implicitly, in net worth.<sup>259</sup>

#### Data required for the aggregation of deposit-takers' data

11.35 Some adjustments are required to avoid double counting of capital and assets, and overstatement of specific income and expense lines when data for individual entities are

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<sup>257</sup> However, it is the approach for nonresident subsidiaries/associates owned by resident corporations.

<sup>258</sup> Because income data are not presented for the other financial corporations sector, no additional information on retained earnings for this sector is needed.

<sup>259</sup> It was noted in Chapter 4 (paragraph 4.110) that negative goodwill is possible.

aggregated to produce information for the entire sector. These sector-level adjustments are explained in Chapter 5. Table 11.2 provides a complete list of the series required to make the adjustments, which are explained below, although, depending upon national circumstances, not all may be relevant. Moreover, the total data could be disaggregated by column to gain greater understanding of the relationships with subsidiaries, associates, and other deposit-takers.

11.36 Table 11.2 relates to positions and flows among deposit-takers in the reporting population and is based on the assumption that the reporting population covers all domestic deposit-takers. Additionally, subgroups of the reporting population could be specified to create data on a peer group basis. However, this would increase data collection costs, and the *Guide* considers that such a collection of additional detailed data should be based on the specific analytical needs of each country. Peer group data and their compilation are discussed in Chapter 15; given the costs, peer group data might well be compiled on an approximate best practice basis.

11.37 *Equity investments in deposit-taking subsidiaries, deposit-taking associates, and other deposit-takers.* To avoid double counting of deposit-takers' capital and reserves for the entire sector, equity investments in other deposit-takers need to be excluded.<sup>260</sup> So, for equity investments in deposit-taking subsidiaries and deposit-taking associates (and for reverse equity investments), the value of the proportionate share in the capital and reserves needs to be separately identified.<sup>261</sup> The required data on equity investments are not ordinarily collected as part of the national accounts data. The series in Table 11.2 differ from the similar series in Table 11.1 to the extent that the deposit-takers have nondeposit-taking subsidiaries and associates (included in the Table 11.1 series, but not in the Table 11.2 series). While the table provides a disaggregated view of the data required, aggregated data will suffice for shares and other equity for deposit-takers' subsidiaries and associates in the reporting population.

11.38 For equity investments in other deposit-takers, the market value of the equity owned needs to be identified and deducted from total capital and reserves (a numerical example is provided in Appendix V, section III). The required data on such equity investments might be available from national accounts sources if the market value of equity investments in resident subsidiaries and associates can be separated from equity investments in other deposit-takers in the reporting population.

11.39 Line 2—shares and other equity—is not required if captured in data reported under Table 11.1.

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<sup>260</sup> For the same reason, similar adjustments are needed for the nonfinancial corporations sector because equity is a denominator for three FSIs for that sector (see ahead).

<sup>261</sup> If Tier 1 data are not available, the proportionate share of narrow capital and reserves could additionally be identified (paragraph 4.64).

11.40 *Certain income items.* The income data series in Table 11.2 (item 3) are required to ensure that specific sub-totals are not overstated for the sector as a whole.

11.41 Fees and commissions and any other noninterest income earned by a deposit-taker from another deposit-taker will not affect net income, but will be reflected in gross terms in both the noninterest income and expenses lines (see also paragraph 4.21). It is recommended that any such intra-deposit-taking sector income and expense be excluded from the sector totals for gross income and noninterest expenses. These data might be available from national accounts sources.

11.42 Similarly, as the inclusion of dividend income in the noninterest income line would affect gross and net income for the sector, it is recommended that such income be eliminated from gross income and dividends payable. With regard to the proportionate share of retained earnings from deposit-taking associates and deposit-taking subsidiaries (and from reverse equity investments), these amounts should also be excluded from noninterest income, and from retained earnings for the entire sector. Any gain or loss in the period on a sale of fixed assets to another deposit-taker is not a gain or loss for the sector as a whole and thus is deducted from sector-wide income. Data on dividends may be available from national accounts sources, but data on the proportionate share of retained earnings and sales of fixed assets will not be so available.

**Table 11.2. Deposit-Takers—Intra-Sector Positions and Flows**

<b>Domestic Deposit-Takers</b>				
	<i>Of which:</i>			
	<i>Total</i>	<i>Subsidiaries<sup>1/2/</sup></i>	<i>Associates<sup>1/2/</sup></i>	<i>Other deposit-takers</i>
1. Shares and other equity <sup>3/</sup>		Required <sup>4/</sup>	Required <sup>4/</sup>	Required
2. Shares and other equity		<sup>5/</sup>	<sup>5/</sup>	Not applicable
3. Noninterest income (excluding trading gains and losses):	Required			
o/w Fees and commissions	Required			
Dividends receivable	Required			
Pro-rated share of retained earnings	Required <sup>6/</sup>			Not applicable
Gains or losses in the period on sale of fixed assets to other deposit-takers	Required			
4. Gains and losses on equity investments in other deposit-takers		Not applicable	Not applicable	Required
5. Nonperforming loans to deposit-takers in the reporting population <sup>7/</sup>				
Current period				
Provisions for accrued interest	Required			
Specific provisions	Required			
Outstanding position				
Provisions for accrued interest	Required			
Specific provisions	Required			
6. Short-term claims on other deposit-takers in the reporting economy (remaining maturity)	Required			
1/ Including deposit-taking branches of separately incorporated subsidiaries and associates.				
2/ Resident deposit-taking subsidiaries/associates that have reverse equity investments in their resident parent deposit-taking investor should report the transactions and positions vis-à-vis the parent investor in these columns.				
3/ Valued as the proportionate share of the parent deposit-takers' stake in subsidiaries/associates capital and reserves (and similarly for reverse investments), and as the market value of any equity stake in other resident deposit-takers. For subsidiaries and associates, if Tier 1 data are not available, the narrow measure of capital and reserves could also be identified (see paragraph 4.64).				
4/ These data series could be reported as one combined figure.				
5/ As valued in the balance sheet, if different from line 1. Moreover, if the balance sheet value of subsidiaries and associates is reported in Table 11.1, these data are not required.				
6/ Subsidiaries and associates only.				
7/ These series might be insignificant in some economies. If there are other nonperforming claims on other deposit-takers in the reporting population, the data series specified in item 5 are required for these assets.				

11.43 *Gains and losses on equity investments* (item 4) are required so that gains and losses arising from these intra-sector claims do not affect sector-wide income.

11.44 Data on *nonperforming loans to other deposit-takers in the reporting population* (item 5) are required to eliminate asymmetric reporting at the sector-level between debtor and creditor deposit-takers.<sup>262</sup> The data on outstanding specific provisions to other deposit-takers in the reporting population are required in order to be added back to capital and reserves and to reduce the total amount of outstanding specific provisions (see paragraph 11.28). Moreover, provisions for accrued interest on nonperforming loans to deposit-takers in the reporting population need to be added to the outstanding value of loans.

11.45 Data on *short-term claims on other deposit-takers in the reporting economy* (item 6) are required to adjust the short-term liabilities data for those to other deposit-takers.

#### Consolidated information

11.46 The *Guide* encourages the compilation of FSI series on a consolidated basis for entities in the same sector and reporting population. Thus, for data compiled using national accounts information, certain additional intra-group data need to be eliminated. The series required are set out in Table 11.3.

11.47 The series in Table 11.3 are intended to supplement those in Table 11.2. Whereas the series in Table 11.2 are required to eliminate some positions and transactions when aggregating data at the sector level, the series in Table 11.3 are those needed to consolidate sector-wide data (see Box 5.1). Information on intra-group positions might also be of analytical interest in its own right.

11.48 Intra-group positions are those positions with resident entities that are in the same group as the reporter, but are separately incorporated or are offices of separately incorporated entities. Therefore, if a parent has positions with its domestic deposit-taking subsidiary, these are included in the table, as are positions of the subsidiary with a domestic deposit-taking branch of the parent or other domestic subsidiaries (or branches of the subsidiary) in the group and the reporting population. It might help the compiler to be informed of the names of group members in the reporting population.

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<sup>262</sup> The same approach is adopted for other nonperforming intra-sector claims.

**Table 11.3. Deposit-Takers—Other Intra-Group Positions and Flows**

		<b>Domestic Deposit-Takers</b>
		Other group entities <sup>1/</sup>
<b>Balance Sheet</b>		
Liabilities to:		
Deposits		Required
Loans		Required
of which: <i>foreign-currency-denominated</i>		Required
<i>Foreign-currency-linked</i>		Required
Debt securities		Required
Financial derivatives		Required
Other liabilities		Required
Total foreign-currency-denominated liabilities		Required
Total foreign-currency-linked liabilities		Required
<b>Income and expense statement</b>		
Interest income receivable		Required <sup>2/</sup>
<b>Memorandum items relating to claims:</b>		
Liquid assets claims (core)		Required
Liquid assets claims (broad)		Required
Nonperforming loans		Required

1/ A group in this context is a parent deposit-taker, its deposit-taking branches, and deposit-taking subsidiaries in the reporting population. So this column covers those entities within the same group as the reporting entity but are separately incorporated or are domestic offices of entities that are separately incorporated.

2/ This item is required to ensure that there is consistency in the consolidated balance sheet between the treatment of debt instruments in the balance sheet (intra-group claims excluded) and gross interest income and expense in the income account (intra-group flows also excluded).

11.49 For the balance sheet items, data are for liabilities only, and for the memorandum items, data refer to claims only. Data on foreign-currency-denominated and foreign-currency-linked loans could be reported as one combined figure. For the balance sheet series at the sector level, gross liabilities and gross assets are reduced; if the parent lends to its subsidiary, gross loan assets and liabilities and the gross interest income and expense are reduced at the sector level by the outstanding amount of loans extended and interest income receivable, respectively, by the parent vis-à-vis the subsidiary as of the reference date.

11.50 The data for the memorandum items are needed to reduce the sector-level totals on account of these items.

*Cross-border consolidated data*

11.51 To compile data on a domestically controlled cross-border consolidated basis compilers may need to rely on supervisory data. If these data are reported on a cross-border consolidated basis,<sup>263</sup> Table 11.4 sets out the series needed to avoid overstatement of certain income items, as well as capital and reserves in the sector-wide data. The table relates to positions and flows among deposit-takers in the reporting population.

11.52 The extent to which data are required will depend upon national circumstances. For instance, if supervisory requirements do not permit, or require data to be reported excluding, intra-deposit-taking equity investments, then data on shares and other equity are not additionally required. As noted above, in determining the need to collect new data, and hence incur an increased resource cost, authorities must make a judgment as to the likely impact and importance of the additional data series for compiling FSI data.

11.53 Depending upon accounting standards adopted, additional series not included in Table 11.4 might be needed to adjust individual deposit-taker's data. These series comprise (1) purchased goodwill, which should be excluded from nonfinancial assets and from capital and reserves, (2) the amount of amortized goodwill each period, which should be excluded from income, and (3) gains and losses on the sale of subsidiaries and associates (including those on reverse investments), which should be excluded from income.

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<sup>263</sup> If supervisory data are reported on a group consolidated basis, which consolidates information for subsidiaries that are not deposit-takers, other adjustments are needed to "deconsolidate" such subsidiaries in order to compile data on a deposit-takers-only basis.

**Table 11.4. Domestically Controlled Deposit-Takers—Inter-Group Positions and Flows**

**(Cross-border consolidated data)**

<i>Other Domestically Incorporated, Domestically Controlled Deposit-Takers, their Subsidiaries<sup>1/</sup> and Branches</i>			
	<i>Total</i>	<i>Of which:</i>	
		<i>Associates<sup>2/</sup></i>	<i>Other</i>
1. Shares and other equity <sup>3/</sup>		Required	Required
2. Shares and other equity <sup>4/</sup>		Required	Not applicable
3. Noninterest income (excluding trading gains and losses):	Required		
o/w Fees and commissions	Required		
Dividends receivable	Required		
Pro-rated share of retained earnings		Required	Not applicable
Gains or losses on sale of fixed assets to other deposit-takers	Required		
4. Gains and losses on equity investments in other deposit-takers		Not applicable	Required
5. Nonperforming loans to deposit-takers in the reporting population <sup>5/</sup>			
Current period			
Provisions for accrued interest	Required		
Specific provisions	Required		
Outstanding position			
Provisions for accrued interest	Required		
Specific provisions	Required		
6. Short-term claims on other deposit-takers in the reporting economy (remaining maturity)	Required		

1/ Including deposit-taking branches of separately incorporated subsidiaries.  
2/ Domestically controlled deposit-takers that are associates of domestically controlled deposit-takers and have reverse equity investments in the latter should report the transactions and positions vis-à-vis the associate investor in this column.  
3/ Valued as the proportionate share of the parent deposit-takers' stake in associates' capital and reserves (and similarly for reverse investments), and as the market value of any equity stake in other deposit-takers in the reporting population.  
4/ As valued in the balance sheet, if different from line 1.  
5/ Such nonperforming loans might be significant in some economies. If there are other nonperforming asset claims on other deposit-takers in the reporting population, the data series specified in item 5 are required for these assets.



11.54 The data requirements in Table 11.4 mirror those in Table 11.2 and are needed for the same reasons provided in describing that table. They relate to the positions and flows among domestically controlled deposit-taking groups that have parent banks incorporated in the domestic economy.

11.55 The total data could be disaggregated by column to gain a greater understanding of the relationships with associates, and other deposit-takers.

*Compiling cross-border consolidated data from national accounts information*

11.56 To compile data on a cross-border consolidated basis, as noted above, compilers might need to rely on supervisory data. However, there is growing interest among compilers and users of macroeconomic statistics to develop foreign affiliate trade data. One focus at the present time is on information on trade-in-services, as well as on understanding the modes of supply by domestic entities to foreign markets, one of which is through direct investment in a foreign market by establishing local subsidiaries, branches, or associates. A recently published manual on international trade in services<sup>264</sup> is likely lead to progress in this field. Beyond production and trade-in-services data, the manual discusses the possibility of compiling data on assets and net worth for foreign affiliates (paragraphs 4.67-4.68 of the manual) on the basis of the concepts in the *1993 SNA*. Given these developments, there may be mutual benefit in FSI compilers' consulting with those agencies responsible for compiling trade-in-services data to learn more about ongoing or planned compilation of data on trade of foreign affiliates of domestic entities.

***Other financial corporations***

11.57 For other financial corporations, additional data series for the balance sheet only might be required, primarily in order to exclude intra-sectoral equity investments. For data reported on a nonconsolidated basis, information on intra-group positions would be needed.

11.58 The additional data series required are set out below. Unlike the tables for deposit-takers above, Table 11.5 can be relevant for both domestic and cross-border consolidated data.

11.59 Shares and other equity in subsidiaries and associates (and reverse investments) should be valued on the balance sheet at the proportionate share of the investor's stake in the capital and reserves of each subsidiary and associate. If these equity investments are reported on the balance sheet at market value, these data need to be replaced by the proportionate value information specified in the required shares and other equity series in columns 1 and 2. Depending upon the source, the data for subsidiaries and associates might be reported on a combined basis. For data provided on a consolidated basis, adjustments for subsidiaries may not be required.

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<sup>264</sup> See the United Nations and others (2001).

11.60 Equity investments of other financial corporations in their other financial corporations subsidiaries and associates in the reporting population (and similarly for reverse investments) as well as in other financial corporations in the reporting population need to be excluded from sector-wide capital to avoid double counting of capital. Hence, the required shares and other equity series in columns 3, 4, and 5. The data for subsidiaries and associates could be combined, depending upon the source.

11.61 Data on purchased goodwill are required in order to deduct the value of goodwill from nonfinancial assets and from capital and reserves. The data for subsidiaries and associates could be combined, depending upon the source.

11.62 If source data are on an unconsolidated basis, such as in the national accounts, adjustments will need to be made not only for shares and other equity but also for other intra-group positions that appear on the balance sheet.<sup>265</sup> These balance sheet positions are listed in column 3. As noted in the description of Table 11.3, gross liabilities and gross assets at the sector-level are reduced by the amount reported for each series listed.

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<sup>265</sup> If source data consolidate information for subsidiaries that are not other financial corporations, other adjustments are needed to “deconsolidate” such subsidiaries in order to compile data on an other financial corporations-only basis.

**Table 11.5. Other Financial Corporations—Additional Data Series**

	<i>Of which: “Other Financial Corporations” in the Reporting Population</i>				
	Subsidiaries <sup>1/</sup> (1)	Associates <sup>1/</sup> (2)	Subsidiaries <sup>1/2/</sup> (3)	Associates <sup>1/</sup> (4)	Other (5)
<b>Balance sheet</b>					
Shares and other equity <sup>3/</sup>	Required	Required	Required	Required	Required
Shares and other equity <sup>4/</sup>	Required	Required	5/	5/	
Purchased goodwill	Required	Required			
Liabilities: <sup>2/</sup>					
Deposits			Required		
Loans			Required		
Debt securities			Required		
Insurance technical reserves			Required		
Financial derivatives			Required		
Other liabilities			Required		

1/ Other financial corporations in the reporting population that are subsidiaries/associates and have reverse equity investments should report the positions vis-à-vis their parent investor(s) in columns 1 and 2. If both the reverse investor and the entity in which they are investing are in the reporting population, data should also be reported in column 3 and/or in column 4.

2/ These data are only required if the source data are only available on an unconsolidated basis, such as in the national accounts. This column covers positions with all those entities in the same group as the reporting entity and are in the reporting population but are separately incorporated or are offices of entities that are separately incorporated.

3/ Valued as the proportionate share of the investor’s stake in subsidiaries and associates capital and reserves (similar for reverse investments), and as the market value of any equity stake in other financial corporations in the reporting population.

4/ As valued in the balance sheet, if different from the line above.

5/ These series are only required if the series in columns 1 and 2 are not reported.

### ***Nonfinancial corporations***

11.63 For nonfinancial corporations, to calculate the agreed FSIs additional data series might be required. Two sets of data series are presented ahead: first, Table 11.6 covers additional data series not available from the national accounts methodology; and second, in Table 11.7, other additional data series are covered. Series marked as “required” are those needed to calculate an agreed indicator. As with other sectors, the importance of specific data series depends upon national circumstances, and in determining the need to collect new data, and hence incur increased resource costs, authorities must make a judgment as to the likely impact and importance of the additional data series for compiling FSI data.

11.64 Table 11.6 covers items in the income and expense statement and in the balance sheet. Some data series are required to adjust sector-level income to ensure that it is not unduly increased by intra-sector transactions, while other series are those specifically required to compile an FSI ratio.

11.65 Unlike national accounts sources, data on gains and losses on financial instruments are included under income in the *Guide*, as are gains and losses in a given period on the sale of fixed assets. Gains and losses on financial instruments are potentially available from the revaluation account of the *1993 SNA*; if so, data on gains and losses on the sale of subsidiaries and associates need to be excluded (see paragraph 11.24). Data on extraordinary items might also be available from national accounts sources (see Appendix IV).

11.66 Data on debt service payments and on the net open position in foreign exchange are required to calculate two indicators and are not available from national accounts sources. The need for data on shares and other equity and the pro-rated share of retained earnings relating to subsidiaries, associates, and other nonfinancial corporations is the same as described for deposit-takers in paragraph 11.33. Data on purchased goodwill are required in order to deduct it from nonfinancial assets and from capital and reserves (and to exclude the amortization of such goodwill from income).

11.67 Additional data series required are set out in Table 11.7, but unlike the tables for deposit-takers above, this table can be relevant for both domestic and cross-border consolidated data. The table relates to positions and flows among nonfinancial corporations in the reporting population. Many of the series are required in order to eliminate (1) intra-group positions in order that the sector-level data are compiled on a consolidated basis, (2) intra-sector equity investments to avoid double counting of capital and reserves at the sector-level, and (3) intra-sector income transactions to ensure that sector income is not unduly increased by intra-sector transactions.

**Table 11.6. Nonfinancial Corporations—Series not Covered in National Accounts  
Methodology**

**Income-and expense-related**

Gains and losses on financial instruments	Required
Gains and loss on the sale of an associate or subsidiary <sup>1/2/</sup>	Required <sup>3/</sup>
Gains/losses on sale of fixed assets in the period <sup>1/</sup>	Required
Extraordinary items	Required

**Balance-sheet-related**

Debt service payments	Required
Net open position in foreign currency	Required

	<i>Subsidiaries</i> <sup>4/</sup>	<i>Associates</i> <sup>4/</sup>
Shares and other equity <sup>5/</sup>	Required	Required
Shares and other equity as valued on balance sheet <sup>6/</sup>	Required	Required
Pro-rated share of retained earnings (income)	Required	Required
Purchased goodwill	Required	Required

1/ Measured as the difference between the sale value and the balance sheet value at the previous end-period.

2/ Such data are also required if commercial accounting sources are used that include such gains and losses in income.

3/ Depending on the source of information on gains and losses on financial instruments (see paragraph 11.65).

4/ Including reverse equity investments of subsidiaries and associates in their parent investors. The data for subsidiaries and associates for each item could be provided in one aggregate figure; that is, separate identification is not essential.

5/ Valued as the proportionate share of the parent deposit-taker's stake in subsidiaries/associates capital and reserves.

6/ As valued on the balance sheet, if different from the previous line.

11.68 For the income items, the need for data on dividends receivable, gains and losses on sale of fixed assets to other nonfinancial corporations, and gains and losses on equity investments in nonfinancial corporations are the same as described for deposit-takers for Table 11.2 (see paragraphs 11.41 and 11.42). With regard to the proportionate share of retained earnings, any amounts attributable to nonfinancial associates and subsidiaries (and from reverse equity investments) in the reporting population should be excluded from sector-wide income. However, in the consolidated data at the sector-level, interest receivable from nonfinancial subsidiaries should be excluded from interest income and interest expense (see also paragraph 11.49). In addition, the total data could be disaggregated by column to gain greater understanding of the relationships with subsidiaries, associates, and other nonfinancial corporations.

**Table 11.7. Nonfinancial Corporations—Additional Data Series**

	Nonfinancial Corporations (in the reporting population) <sup>1/</sup>	Of which:		
		Subsidiaries <sup>2/3/</sup>	Associates <sup>2/</sup>	Other
<b>Income-and-expense-related<sup>4/</sup></b>				
Dividends receivable	Required			
Interest income receivable		Required	Required <sup>5/</sup>	Required <sup>5/</sup>
Pro-rated share of retained earnings	Required <sup>6/</sup>			Not applicable
Gains or losses in the period on sale of fixed assets to other nonfinancial corporations	Required			
Gains and losses on equity investments in other nonfinancial corporations				Required
<b>Balance sheet</b>				
Shares and other equity <sup>7/</sup>		Required <sup>8/</sup>	Required <sup>8/</sup>	Required
Shares and other equity				
Liabilities				
o/w Deposits		Required		
Loans		Required		
Debt securities		Required		
Trade credit		Required		
Financial derivatives		Required		
Other liabilities		Required		
Balance-sheet-related				
Debt service receipts		Required		

1/ If data are provided on a consolidated basis, with subsidiaries in the reporting population included, then the data in this column should exclude transactions with these subsidiaries. The total data could be disaggregated by column to gain greater understanding of the relationships with subsidiaries, associates, and other deposit-takers.

2/ Nonfinancial corporations in the reporting population that are subsidiaries/associates and have reverse equity investments should report the positions vis-à-vis their parent investor(s) in these columns.

3/ These data are only required if the source data are only available on an unconsolidated basis, such as in the national accounts. This column covers positions with all those entities in the same group as the reporting entity and are in the reporting population but which are separately incorporated or are offices of entities that are separately incorporated.

4/ If commercial accounts data are the source of information, depending upon the accounting practice adopted, data on the amortization of goodwill will also be required so that it can be excluded from income.

5/ Data on interest income receivable from associates and other nonfinancial corporations in the reporting population can be combined into one figure.

6/ Covers only subsidiaries and associates.

7/ Valued as the proportionate share of the investor's stake in subsidiaries and associates capital and reserves (similar for reverse investments), and as the market value of any equity stake in other nonfinancial corporations in the reporting population.

8/ As valued in the balance sheet, if different from the line above. Moreover, if the balance sheet value of subsidiaries and associates are reported in Table 11.6, these data are not required.

11.69 Data on shares and other equity relating to subsidiaries, associates, and other nonfinancial corporations are needed to eliminate inter-sector equity investments in order to avoid double counting of capital and reserves at the sector-level (see also paragraphs 11.37 and 11.38). If source data are on an unconsolidated basis, such as in the national accounts, intra-group positions in the balance sheet items listed in the second column need to be deducted from gross liabilities and gross assets in order to derive positions on a consolidated basis. Moreover, if source data are on an unconsolidated basis, debt service receipts from subsidiaries are also required to be deducted from debt service payment data on a consolidated basis.<sup>266</sup>

11.70 Another data series that is required is the number of applications for protection from creditors.

### **Availability of data**

11.71 It is unlikely that all data series specified in the *Guide* are readily available to all national authorities. As noted earlier, some data series may not be currently collected, and others may not meet the definitions recommended in the *Guide*. In such circumstances, the data that most closely approximate the principles in the *Guide* should be used, but it is important that, for each data series, differences from the recommendations in the *Guide* be described in the metadata.

11.72 Data series for the numerator and denominator of a FSI ratio may not be available with the same periodicity, restricting the frequency of compilation of the indicator. Depending on the nature of the underlying series, it may be possible to estimate the series that are available less frequently,<sup>267</sup> but the results should be used with caution.

11.73 The assumptions underlying any “grossing-up” procedures for missing reporting entities should be carefully reviewed. For example, they might implicitly assume that the reporting population is representative of the nonreporting population, whereas the nonreporting population might be specialized in certain lines of business.

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<sup>266</sup> It is proposed that receipts from, rather than payments to, other nonfinancial corporations be collected given that if tradable bonds are issued, the payer might not know the identity of the creditor. But of course, debt service receipts from the creditor perspective are debt service payments from the perspective of the debtor.

<sup>267</sup> For instance, for data available only annually, but which are required to compile a quarterly ratio, growth could be projected from the previous annual observation based on past trends or with reference to some relevant index or item, adjusted for any occasional events that would affect the series. For past quarters for which beginning and end year data are available, a linear growth rate between the end year observations could be assumed or the growth rate could reflect movements in a relevant index, adjusted for known occasional events that would have affected the time series. Such estimation methods are used, for example, in the Austrian National Bank in compiling quarterly financial accounts data.

**Breaks in data series**

11.74 It is particularly important to monitor and document breaks in data series because they can affect the analysis. One of the most frequent types of breaks arises from changes in the reporting population. For instance, new deposit-takers can be licensed while others are closed. Moreover, mergers between deposit-takers can have significant consequences.

11.75 For data compiled on a domestically controlled cross-border consolidated basis, resident deposit-takers' acquisitions of nonresident deposit-takers boost the assets and liabilities of the resident deposit-takers' sector and increase the exposure of the sector to nonresident markets, while foreign deposit-takers' acquisitions of domestically controlled deposit-takers have the opposite effect. Furthermore, for domestic consolidated data, if one deposit-taker merges with another, their existing positions between these deposit-takers will be eliminated, causing a break in the data series for the entire sector; the larger the deposit-takers, the more significant will be such a break in the data series. The effect could be even more significant on peer group analysis. For instance, if the merger is between deposit-takers in different peer groups, both sets of peer group data (balance sheet as well as income and expense data) will be affected.

11.76 In general, it is important for compilers to document mergers and any changes in underlying accounting rules that affect the continuity of the data series. Such information should be maintained over time.

11.77 In calculating any percentage changes when there are changes in the reporting population, adjustments are required if a consistent time series is to be produced. The example below illustrates the adjustments needed. In this example, in period 3 one deposit-taker joins the reporting population and two leave. As a result, the sector-level capital adequacy ratio is substantially strengthened. However, the implied increase in the ratio between periods 2 and 3 (+ 43 percent) does not reflect the change in the underlying performance of the population of reporting deposit-takers but rather changes in the composition of the reporting population. To ascertain the underlying trend, the percentage change should be adjusted so that the population base in the current period (period 3) is the same as that in the comparator period (period 2).

	Period 1	Period 2	Period 3	Period 4
Number of banks in population	10	10	9	9
Joiners (+), Leavers (-)			(+1) (-2)	
Capital adequacy ratio	0.8	0.7	0.10	0.12
Percentage change		-13%	+43%	+20%
Adjusted percentage change			-5%	



Specifically, whereas the percentage change is calculated as follows,

$$\text{Percentage change} = \left\{ \frac{\left[ \left( \frac{S_{pop_{t=3}}^{num}}{S_{pop_{t=3}}^{denom}} \right) - \left( \frac{S_{pop_{t=2}}^{num}}{S_{pop_{t=2}}^{num}} \right) \right]}{\left( \frac{S_{pop_{t=2}}^{num}}{S_{pop_{t=2}}^{num}} \right)} \right\} \times 100,$$

the underlying percentage change, adjusted for differences in the reporting population between the two periods being compared, is calculated as,

$$\text{Adjusted percentage change} = \left\{ \frac{\left[ \left( \frac{S_{pop_{t=3}}^{num} - S_{joiners_{t=3}}^{num} + S_{leavers_{t=3}}^{num}}{S_{pop_{t=3}}^{denom} - S_{joiners_{t=3}}^{denom} + S_{leavers_{t=3}}^{denom}} \right) - \left( \frac{S_{pop_{t=2}}^{num}}{S_{pop_{t=2}}^{num}} \right) \right]}{\left( \frac{S_{pop_{t=2}}^{num}}{S_{pop_{t=2}}^{num}} \right)} \right\} \times 100,$$

where S is the aggregate value of the numerator (denominator) for the population in periods 2 and 3 (that is, the joining or leaving bank(s) in period 3).

### Seasonal adjustment

11.78 As with many economic and financial data series, regularly occurring events or “seasonal factors”—such as public holidays and end-of-year profit-taking by financial institutions and other corporations—can influence changes in the level of an FSI for a given period. Various techniques can be used to identify and remove seasonal influences from FSI time series data, ranging from simple visual inspection of the data series to the application of sophisticated statistical tools.<sup>268</sup> Nevertheless, while the dissemination of seasonally adjusted FSI time series could be considered and can be recommended where large and statistically reliable seasonal influences can be identified, it should be regarded as complementing rather than replacing the dissemination of non-seasonally adjusted time series data. Seasonal adjustment methods should be documented in metadata, and consideration should be given to disseminating information on the statistical reliability of the seasonal factors.

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<sup>268</sup> For a discussion of a range of seasonal adjustment techniques see European Central Bank (2003).

Table 11.8. Deposit-Takers' Income and Expense Statement and Balance Sheet

FSI Lines in the <i>Guide</i>	System of National Accounts (1993 <i>SNA</i> )	International Accounting Standards
	Line item(s)	Relevant standard(s)
<b>Income and expense</b>		
1. Interest income	D. 41; P.11	IAS 18.29; 30.10
2. Interest expense	D. 41; P.11	IAS 18.29; 30.10; 32.30-31
3. Net interest income	D.41; P.11	IAS 30.10
4. Noninterest income (net)		
4 (i) Fees and commissions receivable	P.11	IAS 18 20; 18 App. 14
4. (ii) Gains or losses on financial instruments	AF.2; AF 3: AF. 4; AF.5; AF.7; AF.8	IAS 39.103-108; 30.15; IAS 21.15, 17, 19
4. (iii) Pro-rated earnings	D.43; part of D.42	IAS 28.3; 31.32-34
4. (iv) Other income		
Rental income	D.45; P.11	IAS F74; IAS 40.66 (d) (i)
Dividends and other income from equity holdings	part of D.42	IAS 18.30
Other income	D.75; part of AN11	IAS 8.18; 16.56; 40.28
5. Gross income	3 + 4	3 + 4

**Table 11.8 (continued). Deposit-Takers' Income and Expense Statement and Balance Sheet**

FSI Lines in the <i>Guide</i>	System of National Accounts (1993 SNA)	International Accounting Standards
	Line item(s)	Relevant standard(s)
6. Noninterest expenses		
6 (i) Personnel costs	D.1; D. 623	IAS 19.4
6 (ii) Other expenses	P.2; D.45	IAS 78
Purchases of goods and services	K.1; part of K.9	IAS 16.41-48; 16.50
Depreciation		
Other operating expenses	D.71; D.75	n.a.; IAS 8.18
Taxes other than income taxes, and subsidies	D.29; D.59; D.39	n.a.; IAS 20.29-30
7. Provisions (net)		
7 (i) Loan loss provisions	K.10	IAS 30.45
7 (ii) Other financial asset provisions	K.10	IAS 39 109-111
(Bad debt recoveries)		(IAS 39.114)
8. Net income before extraordinary items and taxes	5. - 6. - 7	5. - 6. - 7.
9. Extraordinary items	K.7; K.8	IAS 8.11-15
10. Income tax expense	D.51	IAS 12.2
11. Net income after tax	8 -( 9+10)	8 - ( 9+10)
12. Dividends payable	D.42; D.43	IAS 18.30; 32.30
13. Retained earnings	11 -12	11 -12

**Table 11.8 (continued). Deposit-Taker's Income and Expense Statement and Balance Sheet**

	System of National Accounts (1993 SNA)	International Accounting Standards	
	Line item	Disclosure requirements	Relevant standard(s)
<b>Balance sheet</b>			
<b>14. Total assets</b>			
<b>15. Nonfinancial assets</b>	AN		IAS 1.66
	AN.1	Property, plant, and equipment	IAS 1.66a; 16.6
	AN.2 - (part of AN.22)	Inventories	IAS 1.66e; 2.4
		Intangible assets	IAS 1.66b; 38.7
<b>16. Financial assets</b>	AF		IAS.30
17. Currency and deposits	AF.2	Cash and balances with central bank	IAS 30.19; 30.21
		Placements with other banks	IAS 30.21
18. Loans	AF.4	Placements with and loans and advances to other banks less Placements with other banks	IAS 30.19; 30.21;39.10
18 (i. i) Interbank	AF.4, S.122	Loans and advances to customers	IAS 30.19
18 (i.ii). Noninterbank	AF.4-S.122		IAS 14.9
Sectoral distribution of loans	AF.4 S.1 through S.2		IAS 14.19
Geographical distribution			
19. Debt securities	AF.3	Treasury bills and other bills eligible for rediscounting with the central bank	IAS 30.19
		Other money market placements	IAS 30.19
		Part of government and other securities for dealing purposes	IAS 30.19 - 32.60 ( c ); 39.10
		Part of investment securities	IAS 30.19- 32.60 ( c ); 39.10
20. Shares and other equity	AF.5	Part of government and other securities for dealing purposes	IAS 30.19; 39.10
		Part of investment securities	IAS 30.19; 1.66d; 28.6
21. Financial derivatives	AF.7	(n) Derivative financial instruments	IAS 32.9-10; 39.10
22. Other assets	AF. 6 + AF.8	Trade and other receivables	IS 1.66f; IAS 39.10
		Tax assets	IAS 1.66i; 12.12

**Table 11.8 (concluded). Deposit-Taker's Income and Expense Statement and Balance Sheet**

	<b>System of National Accounts (1993 SNA)</b>	<b>International Accounting Standards</b>	
	<b>Line item</b>	<b>Disclosure requirements</b>	<b>Relevant standard(s)</b>
<b>23. Liabilities</b>	AF		IAS.30
24. Currency and deposits	AF.2		
(i) Customer deposits	AF.2 -S12	Amounts owed to other depositors	IAS 30.19
(ii) Interbank deposits	AF.2, S122	Deposits from other banks	IAS 30.19
(iii) Other currency and deposits	AF.2, S12-S122	Other money market deposits	IAS 30.19
25. Loans	AF.4	Part of other borrowed funds	IAS 30.19
26. Debt securities	AF.3	Part of borrowed funds	IAS 30.19
		Certificates of deposit	IAS 30.19
		Promissory notes and other liabilities evidenced by paper	IAS 30.19
27. Other liabilities	AF.8	Trade and other payables	IAS 1.66h
		Tax liabilities	IAS 1.66i; 12.12
28. Debt	AF.2 + AF.3 + AF.4 + AF.8	Deposits from other banks + other money market deposits + amounts owed to other depositors + other borrowed funds + certificates of deposit + promissory notes and other liabilities evidenced by paper + trade and other payables + tax liabilities.	IAS 30.19
29. Financial derivatives	AF.7	Derivative financial instruments	IAS 32.9-10; 39.10
<b>30. Capital and reserves</b>	AF.5 + B.90 (- part of AN.22)	Capital and reserves	IAS 1.66m; F.65 - 68
(i) Narrow capital	Funds contributed by owners	Issued capital	IAS 1.74, IAS F65
	Retained earnings	Accumulated profit/loss	IAS F65
	General and special reserves	Reserves	IAS F65 - 66

**Table 11.9. Nonfinancial Corporations' Income and Expense Statement and Balance Sheet**

FSI Lines in the <i>Guide</i>	System of National Accounts (1993 SNA)	International Accounting Standards
	Line item(s)	Relevant standard(s)
<b>Income and expense</b>		
1. Revenues from sales of goods and services (excluding indirect sales taxes)	P.11- (part of P.52)	IAS 18.14; 18.20
2. Cost of sales		
Personnel costs	D.1; D.623	IAS 19.4
Cost of goods and services	P.2; D.45	IAS F 78
Depreciation	K.1; part of K.9	IAS 16.41-48; 16.50
Other costs of sales	D.75; n.a. (potential costs)	IAS 8.18; 37.24
Taxes other than income taxes, and subsidies	D.29; D.59; D.39	n.a.; IAS 20.29-30
3. Net operating income	1. - 2.	1. - 2.
4. Interest income	D.41	IAS 18.29
5. Interest expense	D.41; P.2	IAS 18.29; IAS 32.30-31
6. Other income (net)	D.45	n.a.
Rental income	D.45; P.11	IAS F74; IAS 25.40.66 (d) (i)
Dividends and other income from equity holdings	D.42; D.43	IAS 18.30; 28.3; 31.24-34
Net gains/losses on assets and liabilities	part of AN.11; AF.2; AF.3; AF 4; AF.5; AF.7; AF.8	IAS 16.56; 40.28 21.15, 17, 19
Other income	D.75	IAS 8.18
7. Net income before extraordinary items and taxes	3 + 4 - 5 + 6	3 + 4 - 5 + 6
8. Extraordinary items	K 7: K.8	IAS 8.11-15
9. Corporate income taxes	D.51	IAS 12.2
10. Net income after taxes	7 - (8+9)	7 - (8+9)
11. Dividends payable	D.42; D.43	IAS 18.30: IAS 32.30
12. Retained earnings	11-12	11. - 12.

**Table 11.9 (concluded). Nonfinancial Corporations' Income and Expense Statement and Balance Sheet**

<b>Balance sheet</b>	<b>System of National Accounts (1993 SNA)</b>	<b>International Accounting Standards</b>	
	<b>Line item(s)</b>	<b>Disclosure Requirement(s)</b>	<b>Relevant Standard(s)</b>
<b>13. Total assets</b>			
<b>14. Nonfinancial assets</b>	AN	14+15	IAS 1.66
15. Produced	AN.1		
Fixed assets	AN.11	Property, plant, and equipment	IAS 1.66a; 16.6
Inventories	AN.12	Inventories	IAS 1.66e; 2.4
Other	AN.13	Part of Intangible assets	IAS 1.66b; 38.7
16. Nonproduced	AN.2 (- part of AN 22)	Part of tangible assets	IAS 1.66a; 16.6
		Part of intangible assets	IAS 1.66b; 38.7
<b>17. Financial assets</b>	AF	17+18+19+20+21+22	IAS 1.66
18. Currency and deposits	AF.2	Cash and part of cash equivalents	IAS 1.66g; 7.6
19. Debt securities	AF.3	Part of other financial assets	IAS 1.66c
20. Shares and other equity	AF.5	Investments accounted for using the equity method	IAS 1.66d; 28.6
		Part of other financial assets	IAS 1.66c
21. Trade credit	AF.81	Part of trade and other receivable	IAS 1.66f; 39.10
22. Financial derivatives	AF.7	Derivative financial instruments	IAS 32.9-10; 39.10
23. Other assets	AF.6 + AF.89	Part of trade and other receivables	IAS 1.66f; 39.10
		Tax assets	IAS 1.66i; 12.12
<b>24. Liabilities</b>	AF	28+29	IAS 1.66
25. Loans	AF.4	Part of noncurrent interest-bearing liabilities	IAS 1.66k
		Part of cash equivalents	IAS 1.66g; 7.8
26. Debt securities	AF.3	Part of noncurrent interest-bearing liabilities	IAS 1.66k
27. Trade credit	AF.81	Part of trade and other payables	IAS 1.66h
28. Other liabilities	AF.89	Part of trade and other payables	IAS 1.66h
		Tax liabilities	IAS 1.66i; 12.12
29 Debt	AF.3 + AF.4 + AF.8	Trade and other payables + tax liabilities + noncurrent interest-bearing liabilities + part of cash equivalents	IAS 1.66
30. Financial derivatives	AF.7	Derivative financial instruments	IAS 32.9-10; 39.10
<b>31. Capital and reserves</b>	AF.5 + B.90 (- part of AN22)	Capital and reserves	IAS 1.66m; F65 - 68
(i) Narrow capital		Issued capital	IAS 1.74; F65
		Accumulated profit/loss	IAS F65
		Reserves	IAS F65 - 66

**Table 11.10. Households' Income**

FSI Lines in the <i>Guide</i>	System of National Accounts ( <i>1993 SNA</i> )
	Line item(s)
1. Wages and salaries	D.11
2. Property income receivable (net)	D.4
3. Current transfers	D.62; D.7
4. Other	P1 - (P2 + D.1 + D.29 + D.39 + part of P.52)
5. Less: taxes including social security contributions	D.5; D.6112; D.6113; D.62;D.7
6. Gross disposable income	B.6



### **Box 11.1. Relationship between Monetary and Financial Statistics and FSIs**

Balance sheet data reported to central banks by financial corporations for the compilation of monetary aggregates and financial statistics are a potential source of information for the compilation of data for deposit-takers on a domestic consolidation basis. In 2000, the IMF published the *Monetary and Financial Statistics Manual (MFSM)*.<sup>1</sup> The *MFSM* is harmonized with the *1993 SNA*, and addresses specific analytical needs relating to the role of monetary statistics in assisting monetary policy formulation and monitoring. This box explains how data collected using the *MFSM* methodology can be utilized to compile the agreed indicators for deposit-takers.

The *MFSM* encourages the collection of balance sheet data from resident financial corporations (including branches of foreign banks). Subject to adjustments (see below), the balance sheet items specified in the *MFSM*<sup>2</sup> can be aggregated to construct the following data series on a domestic consolidated basis:<sup>3</sup>

- Customer deposits
- Noninterbank loans
- Sectoral distribution of loans
- Total loans
- Capital and reserves
- Assets
- Gross asset and liability positions in financial derivatives
- Total liabilities
- Equity and other shares

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<sup>1</sup> See IMF (2000).

<sup>2</sup> See Table 7.1 on pages 80–86 of the *MFSM*.

<sup>3</sup> The following structural indicators can also be constructed: total assets of the financial system and of subgroups of financial corporations, as well as claims of financial corporations on residents as a share of total assets.

While a reliable source, monetary statistics might need to be adjusted to bring data series on loans, capital, financial derivatives, and assets and liabilities into accordance with the principles set out in the *Guide*.<sup>4</sup> Moreover, unlike the monetary data, the balance sheet data presented in the *Guide* are explicitly linked to an income and expense account for the financial corporations.

Drawing on the series set out in Tables 11.1 to 11.3, the following adjustments might be necessary:

- Equity investments in subsidiaries and associates are valued on the basis of the investor's pro-rated share of these entities' capital and reserves and not at the market price of the equity held. Any difference in the value is reflected in assets and in capital and reserves. Data shown in Table 11.1 could be used.
- To avoid double counting of deposit-takers' capital and reserves at the sector level, equity investments among deposit-takers in the reporting population need to be excluded, and counterpart adjustments made to capital and reserves. The adjustments could be implemented by using information collected under item 1 (and perhaps 2) in Table 11.2 to eliminate from assets and capital and reserves (1) the market value of shares and other equity investments in other resident deposit-takers and (2) equity investments in deposit-taking subsidiaries and deposit-taking associates.
- Other bilateral claims and liabilities among resident deposit-takers that belong to the same group should be eliminated using the information specified in Table 11.3. Thus, loans and positions in financial derivatives among resident deposit-takers in the same group should be excluded from the aggregated balance sheet data used to compile the data series listed above.
- In the *Guide*, unlike the *MFSM*, data on loans (and other assets) should exclude accrued interest on nonperforming loans (other assets).
- In contrast to the *MFSM* approach, in the *Guide* the value of total assets excludes specific provisions.<sup>5</sup> Accordingly, total assets in the aggregated balance sheet should be adjusted to exclude specific provisions, with a counter-adjustment to capital and reserves (as well as to narrow capital and reserves). In addition, in the *Guide* the value of total assets and of capital and reserves excludes purchased goodwill, unlike in the *MFSM*.

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<sup>4</sup> As noted in this chapter, in determining the need to collect new data, and hence to incur the increased resource cost, authorities must make a judgment as to the likely impact and importance of the additional data series for compiling FSI data.

<sup>5</sup> The value of loans after the deduction of specific provisions is a series used in calculating an agreed indicator.

- Moreover, while general provisions are classified as “other receivables/payable” in the *MFSM*,<sup>6</sup> they are classified as part of capital and reserves in the *Guide*.
- Whereas the *Guide* includes unrealized gains/losses on financial assets and liabilities in retained earnings,<sup>7</sup> such gains and losses are included as part of the revaluation account in the *MFSM*. Thus, if compiling a narrow measure of capital and reserves from the aggregated balance sheet data, unrealized gains/losses on financial instruments need to be reallocated to retained earnings.

Moreover, although the *MFSM* encourages the collection of balance sheet data from all resident financial corporations, as explained in Chapter 2, coverage of the “other depository corporations” in the *MFSM* might not be identical to that of the deposit-taking sector in the *Guide* (see paragraph 2.4, footnote 12).

Other data sources, such as the BIS locational data on the geographic distribution of bank lending, may be collected from the same reporting population as for monetary and financial statistics, facilitating combination of data sources to compile the agreed FSIs. For example, the indicator on the geographic distribution of loans to total loans can be constructed by using the aforementioned BIS data for the numerator and data on total loans from the monetary statistics for the denominator.

<sup>6</sup>See paragraph 179 of the *MFSM*.

<sup>7</sup> In other words, in the *Guide* unrealized gains and losses on financial assets/liabilities are routed through the income and expense account.