4 Sources for Other Components of the 2008 SNA

This chapter presents an overview of the sequence of accounts and balance sheets of the 2008 SNA. It is designed to give the compiler of the quarterly gross domestic product (GDP) estimates a broad understanding of the national accounting framework and an appreciation of how GDP estimates fit into the broad national accounting framework. The chapter also highlights the main data sources that may be used to compile these accounts at the quarterly frequency. However, it does not present a detailed analysis of data sources and the relative suitability of these sources for compiling the sequence of accounts beyond the production account. A comprehensive discussion of data sources and methods for the other accounts and balance sheets components is beyond the scope of this manual.

Introduction

4.1 The *2008 SNA* presents a comprehensive sequence of accounts and balance sheets that record all flows (transactions, price changes, and volume changes) and stocks (opening and closing). These accounts are of considerable analytical interest and can also help compilers identify inconsistencies and errors in the data. Thus, as with the annual accounts, a quarterly national accounts (QNA) system should seek to cover more than GDP and its components, which captured in the production account.

4.2 The previous chapter presented the data sources or estimating GDP based on the three approaches. The expenditure and income approaches also provide the basis for estimating components of some of the other accounts of the *2008 SNA*, such as the income accounts and the capital accounts. For example, some of the components of GDP by expenditure categories are also reflected in the income accounts (household final expenditure in use of income account) and the capital accounts (gross capital formation) and the income approach to GDP provides data used in the income accounts.

4.3 There is increasing interest in these data, as major economic developments often originate in parts of the economy other than goods and services. For example, some economies are driven to a large degree by remittances or aid, while other volume changes and revaluations can be major economic developments in some periods. Financial markets have been found to have major effects on the whole economy and have generated contagion that affects the whole economy. Thus, many countries now compile an increasing range of these types of data, and they have been incorporated in the IMF's Special Data Dissemination Standard Plus and the Inter-Agency Group's Data Gaps Initiative.

General Issues

4.4 The general issues associated with identifying and evaluating data sources discussed in Chapter 3 also apply to the other accounts in the sequence of accounts. As with data used in estimating GDP components, quarterly indicators for other national accounts variables often have shortcomings that need to be addressed.

4.5 QNA could be expanded to include the full sequence of accounts and balance sheets, not only for the total economy, but also on a sectoral basis and on a three-dimensional sector by sector basis (usually referred to as a from-whom-to-whom basis). However, ultimately, the choice and level of detail will depend on user priorities, the availability of indicators, and the stage of development of QNA in the country. The choice will also be influenced by the range of accounts published annually. Data for items beyond GDP and its components may not be included in the initial stage of QNA development and may have lower priority

and accuracy than the quarterly GDP measures, but they should not be ignored, especially in the plans for future improvements.

4.6 The sequence of accounts can be presented in gross or net terms: that is, with or without deducting consumption of fixed capital. For simplicity, the following discussion refers to gross measures, but quarterly consumption fixed capital can be obtained. Annual estimates of capital consumption that follow *2008 SNA* concepts are usually derived by the perpetual inventory method (PIM); in the same way, quarterly estimates could be derived by enhancing the PIM calculations with a quarterly dimension.

4.7 Often, countries considering expanded quarterly accounts will already have done so on an annual basis, so have familiarity with the sources and methods. With the key role of balance of payments and financial statistics in this work, the annual techniques will be able to be applied quarterly.

Institutional Arrangements

4.8 One critical issue in compiling the sequence of accounts by institutional sector is the decision on which agency—between the national statistics agency and the central bank—should be responsible for the exercise. The national statistics agency is usually responsible for compiling estimates of GDP and related aggregates, whereas the central bank often compiles the financial statistics. Based on this traditional arrangement, the statistical agency may compile the current accounts (including the capital accounts and nonfinancial assets) and the central bank may compile the financial accounts and financial balance sheets. However, in deciding on the responsible agency, some basic factors should be considered. These include the following:

a. *The legal framework:* The compilers should determine which agency has the legal authority to compile the statistics or to collect source data from the relevant institutional units. The central bank may have authority to collect data from a limited number of financial units, but may not have the authority to collect data from nonfinancial units. On the other hand, the national statistics agency may be governed by a statistics law that allows it to collect data from all resident entities.

b. *Available resources:* Whereas the statistics agency may have the authority to collect the data, it may not have the resources to do so or to expand the compilation process beyond the estimates of GDP and related aggregates. Therefore, the central bank may assume the responsibility for compiling financial accounts and balance sheets, as a start.

c. *Needs and uses:* The central bank may already be compiling limited sectoral accounts for the financial sector for internal or external use. Therefore, expanding the exercise to cover the financial accounts may not require a significant increase in resources.

4.9 Many countries may therefore adopt a "special approach" to compiling the full sequence of sectoral accounts and balance sheets with the central bank focusing on the financial accounts and balance sheets and the statistics agency focusing on the current accounts. This arrangement requires regular coordination between the two units to ensure that the institutional units are classified consistently and that the same data sources are used, where feasible. Such coordination should serve to minimize the differences between net lending/net borrowing in the capital accounts and net lending/net borrowing in the financial accounts. In theory, these two aggregates should be the same but are never so in practice because of differences in data (e.g., timing, coverage, and definitions), missing data, and errors in compilation. When the agencies cooperate effectively, they can then investigate and explain—and eventually resolve—some of the causes of the discrepancies between the two aggregates. An effective tool to identify problems in the source data is by analyzing these discrepancies.

Identifying Data Sources

4.10 Compiling the sectoral sequence of accounts requires a vast amount of data. Therefore, in considering a compilation process, the compiler may first wish to determine what data are currently available and how these data could be used, before deciding on launching new data collection initiatives. Existing data sources may include financial/regulatory data (e.g., banking statistics and securities statistics), other administrative data, existing surveys, and statistics from macroeconomic frameworks (balance of payments and international investment position [IIP] statistics,

government finance statistics, and monetary and financial statistics). The compiler should also establish a data availability matrix. For each transaction/instrument and sector, this matrix should show the available data sources, including the mirror data (or counterparty data) and data for cross-checks. If there are multiple sources, then these sources should be ranked in terms of their accuracy and reliability, against their timeliness. For example, the compiler may decide to use timely but less accurate data for the first set of estimates and use the more accurate but less timely data for the revisions. The next step is then to identify the data gaps and how they may be addressed. Factors such as the cost of data collection and the timeliness of the data should be considered carefully when attempting to fill data gaps. The compiler should also consider possible estimation techniques to address the data gaps, in the absence of suitable source data.

Accounts for the Total Economy

Main Aggregates for the Total Economy

4.11 The sequence of accounts for the total economy includes important balancing items such as gross national income (GNI), gross disposable income, saving, and net lending/net borrowing. The sequence of accounts for the total economy can be compiled at an early stage in the development of QNA if quarterly GDP by type of expenditure and quarterly balance of payments are available.

4.12 National accounting systems usually work "down" the sequence of accounts starting with the balance on the production accounts (i.e., value added on a sectoral basis and GDP for the total economy), and then deriving balancing items for the income and capital accounts. In some cases, financial accounts data may be available and it may be possible to compile the financial accounts and net lending/net borrowing. Because many of the data sources for transactions among residents have an institutional sector perspective, compilation of accounts for the total economy also contributes to some institutional sector data.

4.13 The production and income accounts constitute the current accounts of the system. The capital accounts, financial accounts, and other changes in assets accounts constitute the accumulation accounts.

Current Accounts

Production Account

4.14 The production account in gross terms shows output at basic prices as resources and intermediate consumption at purchasers' prices as uses. The balancing item for the institutional sector is value added, and when taxes less subsides on products are added, the balancing item for the total economy is GDP. In addition to the presentation of the production account and a fuller presentation of the production process, the explicit calculation of output and intermediate consumption is recommended as good compilation practice for reconciling data with other sources and revealing the implications of assumptions.

Income Accounts

4.15 The *2008 SNA* presents a sequence of income accounts that show the following:

a. how income is generated by institutional sectors,

b. how income is allocated among institutional sectors and the rest of the world,

c. how income is redistributed as current transfers among institutional sectors and the rest of the world, and

d. how disposable income is allocated by households, government units, and nonprofit institutions serving households (NPISHs) between final consumption and saving.

The accounts are discussed separately. In addition to the specific issues for each account, there are some general issues that are relevant to the QNA and apply to more than one of the income accounts.

4.16 Timing issues become particularly significant for some quarterly income account items. Incomes may be paid in lumps, rather than evenly through the year. Examples of payments that be made in lump sums include dividends, interest, taxes, and employee bonuses. The basic accounting principle of the *2008 SNA* is the use of accrual accounting. Thus, the transaction should be recorded when the claim arises rather than when the amount was paid. As noted in Chapter 3, time of recording also plays a role in the annual national accounts, but the effect is more pronounced in the QNA.

4.17 To address these timing issues, it is useful to identify two categories of payments based on their relationship to previous periods:

a. Payments that have a purely ad hoc character are recorded in the period in which they are made. Dividends, for example, are usually determined only after the books are closed on a fiscal year and may not even relate to the company's profits over that year.

b. Payments that have a fixed relation to a given period (e.g., accrued in a previous period or accrued over several accounting periods) should be allocated to the periods in which they accrued.

4.18 Examples are taxes on incomes and products that may be collected in a subsequent period and vacation bonuses that build up over the period of a year and on which employees have a claim if they leave the employment before payment is due. To obtain accrual-based data, the options may include surveys of enterprises—if businesses use accrual principles—allocating data on payments back to the relevant periods, or estimating the accrual of income from data on the underlying flow (e.g., income taxes from wages and profits, possibly subject to a lag). Once these issues are considered on a quarterly basis, the compiler may also realize that the annual data need to be adjusted to meet accrual principles.

4.19 Applying accrual principles to quarterly data in such cases may present such serious practical and conceptual problems that it becomes an obstacle to completing the estimates. In these cases, it may be better to publish data on a cash basis while clearly stating the problems than to publish nothing or publish estimates that have been subject to adjustments without a credible explanation or basis.

Generation of Income Account

4.20 The generation of income account shows the derivation of operating surplus/mixed income as GDP less the sum of compensation of employees and taxes less subsidies on production and on imports. This account shows the identity that underlies the calculation of GDP by the income approach. Accordingly, the required data would have already been compiled if the income approach is being used or an income split has been compiled with operating surplus/mixed income as a residual.

Allocation of Primary Income Account

4.21 The allocation of primary income account shows the derivation of national income. Primary incomes include compensation of employees property income (interest, dividends, etc.). The distributive income transactions paid between residents cancel out for the whole economy. Thus, GNI can be derived simply as GDP plus primary income receivable from the rest of the world less primary income payable to the rest of the world. The external primary income items can be obtained from the balance of payments and are usually derived from surveys of enterprises or banking records.

4.22 The allocation of primary income account requires estimates of property income paid by residents to other residents. Some of the components may be available as by-products of the system of financial regulation or financial sector surveys. Dividends could be estimated from a survey of businesses or from published statements of companies listed on the stock exchange. Alternatively, a model could be developed, such from (lagged) estimates of operating surplus. Dividend behavior depends on national circumstances such as company law, business practices, and tax law. The predictability of this behavior can be assessed from past annual patterns. Seasonal patterns within the year may be unknown without extra information but present fewer serious problems for analysis.

Secondary Distribution of Income Account

4.23 The secondary distribution of income account shows the derivation of disposable income from national income by considering redistribution of income through taxes, social security contributions and benefits, and other transfers. Statistics on transfers paid by governments are usually available from government finance statistics. Other items include nonlife insurance premiums and claims, which may be available from regulators or may be estimated based on distributed annual values if they are accrued evenly throughout the year. International aid, social contributions and benefits to governments of other countries, and other current transfers to and from the

rest of the world can be obtained from the balance of payments.

Use of Disposable Income Account

4.24 The use of disposable income account shows disposable income as a resource. It shows the final consumption of household, NPISHs, and government as uses. Disposable income is obtained from the secondary distribution of income account, while consumption is derived as part of the expenditure approach to measuring GDP. The balancing item is saving, which has considerable analytical interest.

Accumulation Accounts

Capital Account

4.25 The capital account shows how the saving (derived as a balance from the use of disposable income accounts) plus capital transfers are available to finance capital formation and consumption of fixed capital with net lending/net borrowing as the balancing item. Saving is obtained from the use of disposable income account, while capital formation is obtained as was shown under the expenditure approach to GDP. Capital transfers payable or receivable by government can be obtained from the government finance statistics. Capital transfers between residents and nonresidents can be obtained from the balance of payments. The balance is net lending/net borrowing. The net lending/net borrowing for the total economy is equivalent to the balance of the current and capital accounts in the balance of payments.

Financial Account

4.26 The financial account shows changes due to transactions in financial assets and liabilities. These are classified by type of instrument. Data on stocks of financial assets or liabilities by counterpart sectors are often readily available from the financial corporations as a by-product of regulation or monitoring of the financial sector. Financial corporations tend to be relatively large and have sophisticated records, making collection of data financial stocks practical and feasible. In contrast, collecting data on the counterparts to these transactions (e.g. non-financial corporations, government, households) may not be feasible because they may be too numerous, small, and with less sophisticated record-keeping. In addition, a high proportion of financial transactions involve a financial intermediary as one of the parties.

4.27 Data on transactions may not always be available and the difference between opening and closing balance sheet positions is sometimes used as proxy. However, this estimation process is not appropriate. In addition to changes due to transactions, the difference between opening and closing values also includes revaluation and other changes in volumes of assets. Therefore, estimates for transactions as the difference between opening and closing balance sheet positions is misleading and not reconcilable with the information from the current accounts. Further, data on revaluations and other volume changes are analytically useful and should be presented separately in the relevant accounts (see sections on *Other Changes in Assets Accounts* and *Revaluation Account*).

4.28 Other sources may be available to check or complement data from the financial corporations. Data on government financial transactions can often be obtained directly. The financial account of the balance of payments records transactions with nonresidents. It is important that consistent classifications and valuations be used in all these sources. If all are consistently defined, the government and external transactions with the financial sector can be reconciled. Also, the transactions not involving the financial sector can be obtained to complete the totals. The data will also support the simultaneous development of the accounts by institutional sector.

4.29 Information on financing through equity and investment fund shares can be more difficult to obtain. This financing may originate from non-financial entities, and thus data may be less accessible. For listed companies, data may be available from stock-exchange registers. In other cases, company registration requirements include issue of equity. In still other cases, surveys would be necessary. The securities by securities databases in some countries may have data on issuance of debt and equity securities, and may have information on holders.

4.30 The balancing item on the financial account is net lending/net borrowing. The net lending/net borrowing in the financial account is conceptually the same as in the capital account. In practice, if the measure is derived independently, it could differ significantly because of compilation errors and missing data.

Other Changes in Assets Account

4.31 These accounts record changes in the value of assets and liabilities between the opening and closing balance sheets that result from flows other than transactions (other flows). They record two broad types of changes as follows:

a. changes relating to holding gains or losses are recorded in the revaluation account and

b. all other changes are considered changes in volume and are recorded in the "other changes in the volume of assets accounts."

Other Changes in the Volume Assets Account

4.32 This account in turn has three functions as follows:

a. It records the economic appearances and disappearances of assets.

b. It records exceptional, unanticipated events that affect the economic benefits that could be derived from the assets.

c. It records changes in classifications of institutional units and the structure of the assets held by institutional units.

The Revaluation Account

4.33 This account records nominal holding gains, which can then be decomposed into neutral holding gains and real holding gains. A nominal holding gain that is negative is a holding loss. The calculation of holding gains and losses requires records of the assets acquired and disposed of during the period, and the prices at which they were acquired and disposed. The prices of the assets at the beginning of the period are also required. This implies that suitable price indices would need to be developed for the various groups of assets. This type of information may be available for some financial assets, such as listed shares; however, it is more limited for nonfinancial assets, although price indexes for residential and commercial property are available in some countries and have been given priority in the Inter-agency Group's Data Gaps Initiative and the IMF's Financial Soundness Indicators. For other nonfinancial assets, the same deflators used for the relevant part of capital formation can be used for the stock.

Balance Sheets

4.34 The balance sheets show the opening and closing values of assets and liabilities. The difference between the opening and closing values in the balance sheets is explained by transactions, revaluations, and other changes. The transactions are shown in the capital accounts for nonfinancial assets and financial accounts for financial assets. The revaluations could be obtained separately or residually. The financial assets and liabilities part of the balance sheets use similar sources as, and should be compatible with, the transactions data shown in the financial accounts. The IIP is the balance of payments equivalent of the national accounts balance sheets for the financial assets and liabilities.

4.35 Estimates for nonfinancial assets are derived by methods similar to those used annually. For inventories, the same source as for changes in inventories can provide either inventory or an estimate of the change in the levels since the previous estimate of the level. For land, the basic volume is fixed or changes only slowly. For fixed capital, these estimates tend to be based on calculations with the PIM. The same issues arise for estimates of consumption of fixed capital. The calculations could be made quarterly, or, alternatively, they could be made as interpolations from the annual values. The stability of capital is typically strongest in volume terms, while asset prices can be volatile. Thus, current price measures should preferably be derived from the volume measures for each component if there are price indices available for each of the major asset types (e.g., land, buildings, and various categories of equipment).

4.36 The collection of balance sheet data is more subject to problems in valuation than transaction data. Because some stock data in business accounts are valued at historic costs rather than current values, adjustments may be needed (though they will require assumptions about the composition). It is a good practice to obtain information on valuation methods at the same time the value data are collected.

4.37 Balance sheet data are useful in measuring productivity (using capital input) and analyzing spending and saving decisions (through wealth effects). Thus, policy analysts and researchers have shown increasing interest in these data.

Accounts by Institutional Sector

Overview

4.38 The institutional sector accounts could be introduced simultaneously or, more commonly, be gradually developed in several stages. Accounts for the general government and the financial corporations sectors may be introduced first because of the availability of source data, the analytical usefulness of the statistics, and the desirability to have the data in a national accounting framework that would allow these sectors to be linked to the rest of the economy. On the other end of the spectrum, the households and NPISHs sectors are usually more difficult to obtain. Therefore, these sectors could initially be combined and calculated as a residual. The *2008 SNA* framework is a powerful tool for gap filling because of the comprehensive view of relationships and consistent counterparty recording.

4.39 Financial accounts may be easier to implement than the current and capital accounts, because data on transactions and stocks of financial assets or liabilities by counterpart sectors are often available readily from the financial corporations as a by-product of regulation or monitoring of the financial sector. Data compilers often find the usefulness of institutional sector accounts is not appreciated until after the data become available, so statistical compilers should anticipate future uses. For some institutional sectors, income accounts may be developed before capital accounts because of lack of data on transactions in secondhand assets.

4.40 Box 4.1 presents the sequence in matrix form, similar to Tables 2.13 and 2.14 in the *2008 SNA*. The tabulation emphasizes the interrelationships between sectors. It is intended for presentational purposes and should not be taken as a recommended main presentation of the data for a QNA publication for two reasons: (i) because it would be expected in practice that some accounts and sectors would initially be missing and (ii) because the QNA usually emphasize time series, the main presentation should be time-series oriented.

4.41 A basic principle of compiling institutional sector accounts is making use of counterparty information: that is, in any transaction involving two parties, information can be collected from the party from which it can be most efficiently collected. For instance, data on interest payable by government to households can be obtained from one or a relatively small number of government agencies, rather than a large number of households. Counterparty information is the equivalent of using commodity balances in the goods and services and production accounts to fill gaps. Counterparty information becomes particularly important in a quarterly context when there are more likely to be gaps. One issue to be considered is that data providers may not always be able to provide data on the institutional classification of the counterparts if they do not have sufficient information or motivation to do so.

4.42 The use of counterparty information also provides the foundation for from-whom-to-whom presentation. This presentation is very suitable for showing linkages between different parts of the economy, as well as the potential for contagion.[1]

4.43 If the production accounts are based on surveys of businesses and other units, the derivation of production by institutional sector is practical. All that is required is that the institutional sector of the unit be identified in the relevant survey. Some of the less direct methods, however, may not provide any institutional sector splits.

4.44 The income approach to GDP is a foundation for the income accounts by institutional sector. The availability of data on GDP by income component and institutional sector provides the primary income accounts to be completed by institutional sector. Thus, countries that compile quarterly estimates of GDP using the income approach typically have better-developed quarterly accounts by institutional sector.

4.45 Estimates of capital formation by institutional sector are practical if the data are collected from the purchaser rather than the supplier of the capital. These estimates are an important component of the capital accounts. For institutional sector data, it is necessary to cover the secondhand assets; while for the total economy, transactions in existing assets largely cancel out (except for transactions with nonresidents, which can be obtained from trade and balance of payments

[1] An example of a from-whom-to-whom matrix is shown in Tables 8.11-8.15 of the handbook on "*Financial Production, Flows and Stocks in the System of National Accounts*" (United Nations and European Central Bank, 2014).

Box 4.1 Sequence of Accounts and Balance Sheets in the *2008 SNA*

Uses				Transactions and balancing items	Resources			
Total economy	Rest of the world	Goods and services	Total		Total economy	Rest of the world	Goods and services	Total
		499	499	Imports of goods and services		499		499
	540		540	Exports of goods and services			540	540
				Production account				
		3604	3604	Output	3604			3604
1883			1883	Intermediate consumption			1883	1883
		141	141	Taxes on products	141			141
		–8	–8	Subsidies on products (-)	–8			–8
1854			1854	Value added, gross / Gross domestic product				
222			222	Consumption of fixed capital				
				Generation of income account				
				Value added, gross / Gross domestic product	1854			1854
1150			1150	Compensation of employees				
235			235	Taxes on production and imports				
–44			–44	Subsidies				
452			452	Operating surplus, gross				
61			61	Mixed income, gross				
				Allocation of primary income account				
				Operating surplus, gross	452			452
				Mixed income, gross	61			61
	6		6	Compensation of employees	1154	2		1156
			0	Taxes on production and imports	235			235
			0	Subsidies	–44			–44
391	44		435	Property income	397	38		435
1864			1864	Balance of primary incomes, gross / National income, gross				
				Secondary distribution of income account				
				Balance of primary incomes, gross / National income, gross	1864			1864
1212	17		1229	Current transfers	1174	55		1229
212	1		213	Current taxes on income, wealth, etc.	213	0		213
333	0		333	Net social contributions	333	0		333
384	0		384	Social benefits other than social transfers in kind	384	0		384
283	16		299	Other current transfers	244	55		299
1826			1826	Disposable income, gross				
				Use of disposable income account				
				Disposable income, gross	1826			1826
1399			1399	Final consumption expenditure			1399	1399
11	0		11	Adjustment for the change in pension entitlements	11	0		11
427			427	Saving, gross				
				Capital account				
414			414	Gross capital formation			414	414
376			376	Gross fixed capital formation			376	376
–222			–222	Consumption of fixed capital			–222	–222
				Gross fixed capital formation by type of asset				
28			28	Changes in inventories			28	28
10			10	Acquisitions less disposals of valuables			10	10

Box 4.1 Sequence of Accounts and Balance Sheets in the *2008 SNA* (continued)

Uses				Transactions and balancing items	Resources			
Total economy	Rest of the world	Goods and services	Total		Total economy	Rest of the world	Goods and services	Total
0			0	Acquisitions less disposals of non-produced assets			0	0
				Capital transfers, receivable	62	4		66
				Capital transfers, payable	–65	–1		–66
10	–10		0	*Net lending (+) / net borrowing (–)*				
				Financial account				
				Net lending (+) / net borrowing (–)	10	–10		0
436	47		483	Net acquisition of liabilities	426	57		483
				Other changes in the volume of assets account				
13			13	Total other changes in volume	3			3
–7			–7	Produced non–financial assets				
17			17	Non–produced non–financial assets				
3			3	Financial assets	3			3
				Revaluation account (holding gains/losses)				
280			280	Non–financial assets				
84	7		91	Financial assets/liabilities	76	15		91
				Opening balance sheet				
4621			4621	Non–financial assets				
8231	805		9036	Financial assets/liabilities	7762	1274		9036
				Net worth	5090	–469		4621
				Total changes in assets and liabilities				
482			482	Non–financial assets				
523	54		577	Financial assets/liabilities				
				Changes in net worth, total	500	–18		482
				Saving and capital transfers	202	–10		192
				Other changes in volume of assets	10			10
				Holding gains/losses	288	–8		280
				Closing balance sheet				
5103			5103	Non–financial assets				
8754	859		9613	Financial assets/liabilities	8267	1346		9613
				Net worth	5590	–487		5103

statistics, and sales of used vehicles from businesses and governments to households). The same considerations apply to the stocks of nonfinancial assets for balance sheets. Similar to the stocks for the whole economy, they are likely to be stable in aggregate, although transactions in secondhand assets may be a more significant issue.

4.46 The financial accounts and the financial components of the balance sheets are usually among the more complete institutional sector data. Balance sheet data are often already collected from financial corporations. If the counterparts in each transaction, asset, or liability are classified by institutional sectors, there is a strong basis for compiling the data for all the sectors, not only the financial corporations themselves. In addition, balance of payments and IIP data would show transactions, assets, and liabilities between nonresidents and residents that are not financial corporations. One should also pay attention to financial transactions and stocks of assets and liabilities not included in financial sector and balance of payments data, such as household equity in corporations and direct financial relationships between nonfinancial corporations.

4.47 If the accounts are derived independently, net lending/net borrowing for both the capital and

financial accounts will act as checks on each other. Alternatively, if only one account is available, the balancing item can be used as a starting point for compiling the other. Of course, although the relationship between the balancing items on the two accounts is a conceptual identity, the balancing item is a small residual of several large items and could turn out to be of poor quality if there are problems in any of the component series.

Nonfinancial Corporations

4.48 A direct survey of corporations would provide the necessary data, but such surveys may not be available on a quarterly basis. Data may be available for nonfinancial corporations because of the lodgment of information under company legislation. Alternatively, companies listed on the stock exchange or corporations may be required to disseminate quarterly or half-yearly data, and these companies may constitute a significant or representative proportion of the nonfinancial corporations sector. It would be necessary to investigate from annual data whether the other nonfinancial corporations behaved in the same way as the unobserved ones.

4.49 If such direct sources are unavailable, data for nonfinancial corporations may be obtained from counterpart transactions with the other sectors or as a residual. Dividends play a large part in the income accounts for nonfinancial corporations. Taxes and dividends are often not determined on a quarterly basis: for example, dividends may be payable twice a year and profits tax four times a year based on the previous year's earnings.

Financial Corporations

4.50 There is often a wide range of data obtained as a by-product of regulation of the financial corporations sector. As mentioned in the context of financial assets and liabilities, this sector is usually relatively good in terms of the availability of administrative by-product data and ability to provide survey data.

4.51 The monetary and financial statistics are a key source of information for the accounts of financial corporations. The data used to complete the "standardized report forms" used in reporting to the IMF are an important input into the financial accounts. They include extensive detail by financial instrument and by counterparty institutional sector. Some countries may also compile securities databases and this information could be used across various sectors to measure transactions and levels in debt securities.

General Government

4.52 Quarterly data may be readily available for the central government. However, in some cases, complete accounts for the general government may be available with some delay because of difficulties in compiling data for the various levels of state and local government. Government accounting data may be limited to the transactions accounts as the availability of data on government balance sheets may not be as widely available. In addition, issues of timing may be a problem in countries where the government accounts are on a cash basis, because timing issues are more significant in quarterly data (as indicated in Chapter 3). If the IMF's *Government Finance Statistics Manual 2014* (GFSM 2014) is followed to compile and present the government finance statistics, then the data could be used to compile the accounts for the general government. Like the standardized report forms for the financial sector, government finance statistics also provide standard tabulations with detail by instrument and counterparty sector.

4.53 Quarterly government accounting data that do not follow national accounts principles may already be available in some countries. Analysts may already use these data to meet many needs. It is worthwhile, however, to also produce the national accounts presentation of government, as it adds value by facilitating analysis of links between government and other parts of the economy and requires relatively little extra compilation cost.

Households

4.54 Households are key drivers of economic activity and there is likely to be keen interest in the household saving ratio. Some countries may conduct continuous household surveys that could provide some statistics for the accounts of the household sector. As mentioned in Chapter 3 in the discussion of sources for household consumption, household surveys may suffer from level biases; but for QNA purposes, the data are suitable indicators of movement if the bias is consistent.

4.55 Alternatively, many of the items for the household accounts can be derived from counterpart

data: for example, compensation of employees from employers and other income and financial instruments from financial corporations and government. Resident households receive almost all the compensation of employees, mixed income, and social benefits payable by resident sectors. Pensions and annuities are also specific to households, and data are often available from pension providers or are likely to be relatively stable from one quarter to the next. Interest receivable and payable by households could be available separately from financial corporations, or it could be estimated from data on household deposits and loans if those assets and liabilities are identified separately by the financial corporations. The remaining major income component is dividends. The timing and data issues for dividends were discussed in the context of accounts for the total economy. It may be possible to estimate dividends receivable by households based on lagged estimates of operating surplus of corporations and (in some cases) property income receivable from the balance of payments, if they show a stable relationship with the corresponding household income items in annual data.

4.56 For the uses of income, a range of indicators is usually already available. Household final consumption is derived as part of the expenditure approach to GDP and relates entirely to the household sector. Social contributions are obtainable from government accounts and are also specialized to households. Taxes have varying degrees of specificity to households. Interest and insurance premiums payable by households can be obtained or estimated in similar ways to the corresponding income items discussed in the previous paragraph.

4.57 A capital formation survey covering businesses may be designed to produce gross capital formation by institutional sector by identifying the institutional sector of each business in the survey. If all the above items were obtained, it would be possible to derive income and capital accounts for households, and, hence, the analytically important household saving and net lending balancing items.

4.58 Financial corporations may also provide information on household borrowing and household assets in the form of deposits. In some countries, financial corporations may be required to provide separate information on mortgage loans to households and other consumer credit. This counterparty information could be used to compile data for the household sector.

Nonprofit Institutions Serving Households

4.59 The NPISHs sector often receives little attention in the annual accounts and is not always economically volatile enough to justify high priority in quarterly data, although the activities of NPISHs may be quite important in some countries. The *2008 SNA* defines the NPISHs sector more narrowly than the normal use of the term nonprofit may suggest. This sector covers nonprofit institutions that meet two key additional criteria:

a. They provide goods and services to households free or at prices that are not economically significant.

b. They are not controlled by government.

4.60 Government transfers from the rest of the world may be major contributions to the disposable income of NPISHs. When that is the case, such indicators would be available from counterparts through government accounts or the balance of payments, respectively. A household expenditure survey could provide data on transfer from households, such as donations in cash and in kind. In some countries, regulation of charities, trade unions, or political parties may provide data. If the NPISHs sector is economically significant, as it is in some countries, surveys of the institutions themselves would be necessary. Although undesirable for analytical purposes, the NPISHs sector is sometimes combined with the household sector in quarterly data.

Rest of the World

4.61 Balance of payments and IIP statistics provide the data required for the rest of the world accounts. The rest of the world accounts are from the perspective of the nonresidents, whereas the balance of payments and IIP statistics are from the perspective of the reporting country. Therefore, they are mirror images of each other and the signs are reversed. If the reporting country compiles balance of payments and IIP statistics on a quarterly basis, then there is no need to compile separate quarterly accounts for

the rest of the world. Like the standardized report forms for the financial sector, the standard components of the sixth edition of the IMF's *Balance of Payments and International Investment Position Manual* (BPM6) also provide tabulations with detail by instrument and counterparty sector. However, these data use a functional classification (separately identifying direct investment portfolio investment, other investment, financial derivatives, and reserve assets) as the highest in the classification hierarchy, while instrument and counterparty sector detail are the next level down in the classification system, so some rearrangement is needed.

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