IV
Monetary and Financial Statistics

Monetary and financial statistics consist of a comprehensive set of stock and flow data on the financial and nonfinancial assets and liabilities of an economy's financial corporations sector. The financial corporations sector plays an important role in matching units that have net lending surpluses with those that have borrowing requirements. Different types of financial corporations play specific roles, and a wide array of financial instruments exists to meet the complex needs of units active in financial markets. To show financial flows among the units and sectors of an economy and corresponding financial asset and liability positions, specialists have created statistical formats to organize and present the monetary and financial statistics.

Primarily, monetary and financial statistics provide important information on money measures, credit to various sectors, and foreign financial assets and liabilities; in addition, they provide valuable links to government finance and balance of payments statistics. They are often available on a more timely and frequent basis than other sets of macroeconomic data. Even countries that follow inflation targeting and do not establish money or credit growth targets may find monetary and financial statistics useful for information on intersectoral financial relationships and links with the rest of the world. Monetary and financial data are important for formulating and implementing monetary policy and broader types of macroeconomic policy.

The *Monetary and Financial Statistics Manual (MFSM*; IMF, 2000c) provides the methodology for compiling monetary and financial statistics that support these continuing needs. In drafting the *MFSM,* experts carefully harmonized it as much as possible with the *1993 SNA* and other macroeconomic statistical systems. In particular, the *MFSM* incorporates the same criteria as the other systems for residency, definition of institutional sectors, and accounting rules for the identification, timing, and valuation of flows and stocks. Like the other macroeconomic statistics, the *MFSM* encompasses transactions, other economic flows, and stock positions. Thus:

The opening balance sheet

plus transactions in financial assets and liabilities
plus other economic flows

equals the closing balance sheet.

Readers should note that, unlike the other systems, monetary and financial statistics do not directly measure current account transactions. Transactions in goods and services, income, and transfers are reflected in the assets, liabilities, and net worth of the units being measured. According to the *MFSM,* the main transactions and positions being measured relate to financial assets and liabilities, although transactions and positions in nonfinancial assets are also reflected.

Other economic flows include holding gains/losses from changes in market prices and exchange rates, particularly important in monetary and financial statistics, and certain other volume changes, particularly debt write-offs, that may be important in specific units or sectors. The *MFSM* covers stock positions and flows, but many countries, at present, continue to focus data collection and analysis mainly on stock data.

The *MFSM* framework for the monetary statistics embodies two levels of data compilation and presentation. The *first* level aggregates stock and flow data, reported by individual institutional units, into sectoral balance sheets. The balance sheets contain comprehensive data for each financial corporation subsector—the central bank, other depository corporations, and other financial corporations. The *second* level consolidates the data in the sectoral balance sheets into surveys. Countries also use the data in the sectoral balance sheets to compile financial statistics.

In addition, for financial sector surveillance, countries can use the data from the *MFSM* framework to support the construction of the matrix of sectoral balance sheets. For example, to support macroprudential analysis, experts have developed new analytical tools called financial soundness indicators (FSIs; Box 14).

Knowing the concepts of *aggregating, consolidating,* and *netting* macroeconomic statistics is particularly useful in understanding monetary and financial statistics. Box 15 sets out these concepts as they apply to collecting and compiling financial statistics, such as flow of funds accounts, within the *1993 SNA* framework. Although for these broader aggregates, experts do not recommend consolidating between sectors and subsectors and netting claims against liabilities, they do consider certain consolidating and

Box 14. Financial Soundness Indicators

Financial soundness indicators (FSIs) are indicators of the current financial health and soundness of entire sectors of financial institutions, as well as the corporate and household sectors—the counterparts of financial institutions. Countries compile the indicators from sectoral data that aggregate and consolidate individual institution data. FSIs also include indicators about the markets in which the financial institutions operate. Aimed at supporting macroprudential analysis, FSIs are to be used in tandem with other tools of such analysis.

The concepts and definitions, as well as sources and techniques for compiling FSIs, are contained in the IMF's *Financial Soundness Indicators: Compilation Guide* (IMF, 2006). To develop this new and coherent methodology for the conceptual framework, the IMF drew selectively from prudential and commercial accounting frameworks (for monitoring individual entities), as well as from macroeconomic statistics frameworks (for monitoring aggregate activity in the economy). The *Guide* distinguishes between two sets of FSIs—core and encouraged. The *core* FSIs, deemed highly relevant in a wide range of countries, cover indicators for the deposit-taking sector. The *encouraged* FSIs, likely to be relevant for some countries, cover the financial and nonfinancial sectors and also include indicators of market liquidity and real estate markets.

netting of positions and flows to be considerably valuable in traditional monetary statistics analysis.

The following sections in this chapter describe (1) the coverage of monetary and financial statistics, (2) financial assets and liabilities, (3) monetary aggregates and depository corporations, (4) the depository corporations survey (DCS), (5) the financial corporations survey (FCS), and (6) flow of funds statistics.

Coverage of Monetary and Financial Statistics

Addressing the coverage of monetary and financial statistics, the *MFSM* identifies three types of financial corporations: the *central bank*, *other depository corporations*, and *other financial corporations*. The central bank and other depository corporations (together, depository corporations) are the institutional focus of monetary statistics; other financial corporations include insurance corporations and pension funds, other financial intermediaries, and financial auxiliaries.

Box 15. Aggregation, Consolidation, and Netting Within the *1993 SNA* Framework

Aggregation refers to summing stock or flow data across all institutional units within a sector or subsector or across all assets or liabilities within a particular category. Aggregating data across the institutional units within a sector or subsector preserves the data on claims and liabilities between the units in that sector or subsector.

For sectors and subsectors, national data compilers aggregate data on financial assets and liabilities into major categories—for example, loans classified by debtor sector and deposits classified by creditor sector. Compilers further aggregate the data to combine major categories of financial assets or liabilities—for example, when combining major categories of monetary assets to form the monetary aggregates or when adding together major categories of claims on various sectors to compile credit aggregates.

Consolidation refers to eliminating stocks and flows occurring between institutional units in a group. Individual institutional units should compile financial flows and stock positions between institutional units but not within an institutional unit. In particular, an institutional unit consisting of a headquarters office and branch offices should compile stock and flow data consolidated across all offices of the institutional unit. For sectors and subsectors, units should not consolidate, as a matter of principle, the flows between institutional units at the elemental level of data reporting and compilation.

Netting refers to specific recommended instances; for example, units should record transactions on a purchases-*less*-sales basis (that is, net acquisition of a specific category of financial assets or liabilities). They should define deposit transactions in a particular category as the amount of new deposits *less* withdrawals during the period. Similarly, units should define securities transactions as the amount of securities purchased *less* the amount redeemed or sold, and loan transactions are defined as the amount of new loans *less* loans repayments, and so forth.

In general, however, units collect and compile the data on a gross basis. In particular, they should *not net* claims on a particular transactor or group of transactors against the liabilities to that transactor or group. For example, a depository corporation might have an outstanding loan to a customer who is also one of its depositors. Compilers should not net the financial corporation's asset (that is, the loan claim) against the liability (that is, the deposit of the borrower).

In exceptional circumstances, regarding claims against liabilities, countries may find it necessary or useful to compile and present data on a net basis for practical reasons. The need to resort to such netting is expected to be relatively rare for most categories of assets and liabilities in the financial corporations sectors of most countries.

The *central bank* is the national financial institution exercising control over key aspects of the financial system. Its activities include issuing currency, managing international reserves, transacting with the IMF, and providing credit to other depository corporations.

Other depository corporations are all resident units engaging primarily in financial intermediation and issuing liabilities included in the national definition of broad money. A measure of money in a given country will depend on the financial instruments available, the financial institutions, and the structure and behavior of financial markets. Thus, it is not possible to specify a precise definition of money applying to all countries. For this reason, it is also not possible to define other depository corporations by the names of institutions. Typically included in depository corporations are all units accepting deposits (demand, time, savings), such as commercial banks, savings banks, building societies, and so forth. However, a unit funded exclusively through the issuance of securities would be classified as a depository corporation if those securities were included in the national definition of broad money in a particular country.

Other financial corporations include insurance corporations and pension funds, other financial intermediaries, and financial auxiliaries. Financial auxiliaries provide services to financial intermediaries and financial markets but do not incur liabilities for the purpose of financial intermediation. For example, security brokers act as agents between buyers and sellers of securities but do not take title to the securities. Other examples of financial auxiliaries are securities exchanges, foreign exchange companies, and units specializing in guarantees.

Among other financial corporations, insurance corporations include those units providing life, accident, health, fire, and other types of insurance to individual units or groups of units. Pension funds are units established to provide retirement benefits for specific groups of employees. Classified as part of general government are social security schemes funded through taxes and controlled by government units that provide retirement and other benefits to members of the community as a whole. Other financial intermediaries cover a very broad range of units that incur liabilities to acquire financial assets but whose liabilities are not included in broad money. These other financial intermediaries may provide credit to other units similar to the credit provided by depository corporations; thus, the classification must be based on the nature of the liabilities.

Financial Assets and Liabilities

As discussed in the introduction to this pamphlet, *financial assets* are a subset of economic assets—entities over which institutional units enforce ownership rights, individually or collectively, and from which they can derive economic benefits by holding or using the assets over a period. Most financial assets originate from financial claims arising from contractual relationships entered into when one institutional unit provides funds to another. Financial assets are therefore financial claims having demonstrable value.

Such contracts, through which asset holders acquire unconditional claims on other institutional units, create creditor/debtor (*asset* and *liability*) relationships with regard to a financial instrument. Exceptions are monetary gold and SDRs—they are financial assets by convention for which there are no corresponding *liabilities.*

Using the *1993 SNA* classification scheme, the *MFSM* classifies financial assets based on two broad criteria: the liquidity of the asset and the legal characteristic underlying the creditor/debtor relationship. The liquidity concept encompasses other more specific characteristics, such as negotiability, transferability, marketability, and convertibility.

Other financial assets within the framework of monetary and financial statistics and as defined in the introduction are currency and deposits, securities other than shares, loans, shares and other equity, insurance technical reserves, financial derivatives, and other accounts receivable/payable.

Readers should note that contractual financial arrangements that do not create unconditional claims on other institutional units, such as guarantees of payment by third parties or lines of credit, are normally referred to as contingencies and are excluded from the monetary and financial statistics.[29]

Monetary Aggregates and Depository Corporations

No single definition of money can be applied to all countries. What is considered to be money reflects a range of issues, including the financial instruments available in a country, the types of financial institutions, and the level of development of financial markets. The *MFSM*, therefore, does not recommend a specific measure or measures of money but rather

[29]Even though excluded from the monetary and financial statistics, data on contingencies should be reported as memorandum items.

describes the issues that a country should take into account in deriving money measures.

The *MFSM* focuses on a country's developing *broad money* measures. Narrow money measures include instruments used directly for making transactions, whereas broad money aggregates include instruments that serve a range of purposes, including making transactions, serving as a store of value, providing income in the form of interest, and so forth. Few countries focus solely on narrow money measures, primarily because other instruments may be substituted quite easily for the transaction instruments.

In defining money measures, countries specify three dimensions: which *instruments* to include, who to include as *money holders*, and which institutions to include as *money issuers*, as shown in the following paragraphs.

First, the *instruments* countries may include in money measures are currency, deposits, and securities other than shares. Countries always include national currency and transferable deposits in money measures, and most countries also include other deposits, unless these deposits are so highly restricted that they do not serve the purposes of money. Some countries include securities other than shares in money measures, when the securities are close substitutes for deposits. For example, negotiable certificates of deposit issued by financial institutions may have many of the same characteristics as deposits accepted by these institutions. Other categories of financial assets are rarely included in money measures.

Second, in defining a measure of money, countries also must specify who to include as *holders* of monetary instruments. Most countries define money holders to include all resident sectors except depository corporations and central government. Thus, money holders are state and local governments, nonfinancial corporations, financial corporations other than depository corporations, households, and nonprofit institutions serving households (NPISH).

Third, *money issuers* include all financial corporations having as liabilities the financial instruments considered to have monetary characteristics. This group of institutions will include the central bank (generally the issuer of currency), commercial and other banks that accept transferable deposits, units that accept other types of deposits (savings banks, building societies, and so forth), and units that issue short-term securities considered by holders to be close substitutes for deposits. It is not possible to identify a money issuer by the name of the institution. For example, "finance companies"

accept deposits in some countries, while in others, controlling institutions fund finance companies directly.

Many countries specify a range of money measures from M1 (currency and transferable deposits) through M2, M3, and so forth. The aggregates differ according to the degree of "moneyness" of the assets included. The higher-ordered monetary aggregates (MAs) include a broader range of monetary instruments, such as foreign-currency-denominated deposits and deposits of longer maturities or those with greater restrictions on conversion into transactions money.

By definition, depository corporations include all financial corporations that issue liabilities included in the national definition of broad money.

Depository Corporations Survey

When assessing monetary statistics, analysts use mainly the *DCS*, which presents depository corporations' broad money liabilities. This section outlines how countries prepare and use a DCS—collecting the monetary and financial statistics, compiling the statistics in balance sheets, and making analytical presentations in monetary surveys, specifically the DCS.

For *collecting* monetary and financial statistics, the *MFSM* recommends countries collect the data in a way that identifies the *types of financial instruments* in the data and, for each instrument, the *positions* with main sectors and subsectors of the economy. That is, they need to identify which units the financial corporations have claims on and which units have claims on the financial corporations. To identify the financial instruments, countries can use an eight-category classification scheme (see Box 2), and to identify units, they can use the institutional sector and subsector description in Chapter 2 of the *MFSM*.

For *compiling* the data from the reporting institutions, the *MFSM* recommends countries use *sectoral balance sheets*. Sectoral balance sheets organize data by categories of assets and liabilities, by resident and nonresident categories, and by appropriate breakdown of the resident sectors—thereby allowing staff to directly prepare presentations for policy and analytical purposes.

The *main analytical presentations* recommended by the *MFSM* are *monetary surveys*—consolidated sectoral balance sheets for one or more subsectors of the financial corporations sector. Surveys cover specific subsectors like the central bank, other depository corporations, and other financial corporations. Surveys also consolidate subsectors. Thus, a *DCS*

consolidates the surveys for the central bank and other depository corporations. And the *FCS* (discussed in the next section) consolidates the depository corporations survey and the other financial corporations survey.

The main survey that analysts use to assess monetary statistics is the *DCS*, which relates depository corporations' broad money liabilities to their foreign assets and liabilities, their net claims on central government, and their claims on other resident sectors. Hence, the DCS links the monetary statistics to the balance of payments and government finance statistics (GFS), respectively, as well as to other sectors.

The DCS is presented in the following general format:[30]

- Assets
  - Net foreign assets
  - Domestic claims
    - Net claims on central government
    - Credit to other resident sectors
- Liabilities
  - Broad money
    - Currency outside depository corporations
    - Transferable deposits
    - Other deposits
    - Securities other than shares
  - Other liabilities (by instrument)
  - Other items (net)

Under *assets*, the DCS identifies claims on and liabilities to nonresidents, presenting these as *net foreign assets*. This provides a direct link to the operations of depository corporations affecting the balance of payments. *Domestic claims* may be broken down according to a country's specific structure and analytical needs, thereby providing the most useful measures of credit.[31] Most countries identify separately *net credit to central government*, permitting a measure of central government financing provided by

[30]All of the surveys follow the same basic analytical structure.

[31]Unlike the central government sector, claims on other domestic sectors are presented on a gross basis. Government deposits are excluded from broad money because the rationale for managing these deposits, influenced by policy considerations, is different from the one guiding the managing of the deposits of other sectors of the economy, including nonfinancial public enterprises. Therefore, claims on central government are presented on a net basis.

depository corporations. *Other domestic sectors* may be broken down by state and local government, public and private corporations, households, nonprofit institutions, and any other mix that is thought appropriate. Many countries also classify credit according to whether the credit is provided to businesses or consumers.

Under *liabilities*, the DCS breaks down broad money by the type of financial instrument in the general framework. In a presentation, countries will often group these instruments into different money measures, proceeding from currency and transferable deposits (M1) to broader measures. The specific measures will depend on the purpose of the analysis and the reliability of the relationship between specific money measures and intermediate or final target variables in the economy.

How Does the Depository Corporations Survey Presentation Facilitate Monetary Analysis?

This DCS presentation facilitates standard approaches to monetary analysis that identify money and factors affecting changes in money through the following identity:

$$M = NFA + NCG + CORS - OIN,$$

where M is the country-specific measure of broad money, *NFA* (net foreign assets) is the net position with nonresidents (the balance of payments effect), *NCG* is net claims on central government, *CORS* is credit to other resident sectors, and *OIN* is the net position of all other items.

Because monetary surveys are based on balance sheet data, their components represent stock data. For analytical purposes, countries can express the identity as changes (Δ) during a period, say, one month or one year:

$$\Delta M = \Delta NFA + \Delta NCG + \Delta CORS - \Delta OIN.$$

Table 13 presents an example of changes in the DCS. It includes hypothetical data entries based on the data examples in the *1993 SNA*.[32]

[32]However, there is no direct link to the *1993 SNA* data examples for several reasons. First, in the financial accounts of the *1993 SNA* all sectors may hold currency and deposits, whereas in the DCS money issuers (central bank and other depository corporations) do not hold them. Second, the *1993 SNA* financial account of a sector is not consolidated, whereas one of the principles for constructing the DCS is the consolidation of accounts between institutional units within a sector.

TABLE 13. DEPOSITORY CORPORATIONS SURVEY
(Annual changes)

Net foreign assets	**23**	**Broad money**	**105**
Monetary gold and SDRs	…	Currency	23
Foreign currency	…	Deposits	82
Deposits	…	Securities other than shares	0
Net credit to central government	**16**	**Other items, net**	**63**
Credit to central government	…		
Government deposits	…		
Credit to other resident sectors	**129**		

Countries that consider the monetary base or reserve money to be an important analytical or policy variable focus on the *central bank survey*. They present the central bank survey in the same format as the depository corporations survey, with the monetary base replacing broad money. Definitions of *monetary base* differ across countries but invariably include currency in circulation and deposits of other depository corporations in the central bank. Some countries have a broader definition, including also deposits of all other resident sectors, except central government, in the central bank. The *MFSM* does not make a specific recommendation about the composition of the monetary base.

Financial Corporations Survey

Many countries have found that changes in the structure of the financial markets, the roles of financial institutions, and the mix of financial instruments available have lessened the usefulness of focusing on specific measures of money. In that case, the *FCS* serves to analyze financial positions for the complete financial sector. This survey is particularly useful in analyzing the credit provided by all financial intermediaries.

The relevance of the FCS has increased as activities by other financial corporations have expanded, in particular by insurance corporations and pension funds. These institutions can manage financial assets and have financial liabilities constituting a significant proportion of the financial assets and liabilities of the other depository corporations sector.

In the same way that countries construct a DCS, they can construct an FCS, which analytically presents the financial corporations sector's claims

on, and liabilities to, all other domestic sectors and nonresidents. Unlike the DCS, the FCS is not structured around the concept of broad money. Moreover, in the liability section, the FCS presents as a separate item *insurance technical reserves*, to highlight the importance of these liabilities within the total liabilities.

Flow of Funds Statistics

In many countries, the development of financial markets has reduced the relative importance of financial intermediaries in providing credit and other financial services. For example, corporations that traditionally borrowed from banks may now meet their financing needs by issuing securities on the financial market and obtaining their financing from a mix of domestic and foreign lenders. If analyzing these developments is considered important, a country may develop a broader basis for financial analysis called *financial accounts* or *flow of funds*. A flow of funds measures all the important financial relationships in an economy and between an economy and the rest of the world. The *MFSM* provides guidance in establishing flow of funds accounts, drawing from the *1993 SNA*.

The national accounts' discussion earlier showed how the financial account for an economy describes the economy's net lending/borrowing transactions with the rest of the world, and the financial instruments involved. If the economy has more savings and capital transfers than it does capital formation, then the account reflects the surplus in *net lending* to the rest of the world. Conversely, if it has less savings and capital transfers than capital formation, the deficit is financed by *net borrowing* from the rest of the world. Primarily, the national account's net lending/borrowing (NL/B) by an economy should be identical to the information presented in the financial account of the balance of payments.

The earlier discussion also noted that countries can compile the sequence of accounts for each domestic sector of the economy. Table 14 gives the financial account from the *1993 SNA* by sector. It provides useful information on how each domestic sector contributes to the overall NL/B of the economy.

The data in Table 14 from the *1993 SNA* show an economy that is a net lender to the rest of the world (by 38 units). The sectoral data are fairly typical in that they show that the nonfinancial corporations and general government sectors are net borrowers, and households are net lenders. Al-

TABLE 14. FINANCIAL ACCOUNTS *(1993 SNA)* BY SECTOR

	Nonfinancial Corporations	Financial Corporations	General Government	Households	NPISH	Total Economy
Net acquisitions of financial assets	**71**	**237**	**120**	**181**	**32**	**641**
F.1 Monetary gold and SDRs		–1				–1
F.2 Currency and deposits	17	15	7	68	12	119
F.3 Securities other than shares	18	53	26	29	12	138
F.4 Loans	27	167	45	5		244
F.5 Shares and other equity	2	3	6	3		44
F.6 Insurance technical reserves				36		36
F.7 Financial derivatives	0	0	0	0	0	0
F.8 Other accounts receivable	7		6	40	8	61
Net incurrence of liabilities	**140**	**232**	**170**	**33**	**28**	**603**
F.2 Currency and deposits		130	2			132
F.3 Securities other than shares	6	53	64			123
F.4 Loans	71		94	28	24	217
F.5 Shares and other equity	26	13			4	43
F.6 Insurance technical reserves		36				36
F.7 Financial derivatives	0	0	0	0	0	0
F.8 Other accounts payable	37		10	5		52
B.9 Net lending (+)/net borrowing (–)	**–69**	**5**	**–50**	**148**	**4**	**38**

though the financial corporations sector has a large volume of transactions in financial assets and liabilities, the sector typically is neither an overall net borrower nor a net lender.

The sectoral table also shows the financial instruments used to effect the net lending or borrowing. For example, the nonfinancial corporations sector acquires a spread of financial assets and incurs liabilities mainly in the form of loans (71) and shares and other equity (26). On the other hand, the financial corporations sector acquires a large part of its assets in the form of loans (167) and incurs equivalent liabilities largely in the form of currency and deposits (130) and securities other than shares (53). The large value of transactions in both financial assets and liabilities by the financial corporations sector reflects its role in financial intermediation.

Although this table presents a good deal of useful information, it does not answer the question of who is financing whom. For a full understanding of financial flows and the role they play in the economy, users need more detail on the relationships among the sectors involved. For example, from Table 14, users can see that the government has incurred liabilities in the form of securities other than shares (64) and loans (94), but they cannot determine whether the borrowing has taken place domestically or abroad. They can answer this question only by having more details on the counterparty to the transaction.[33] The need for more detailed sectoral data is particularly important when analysts assess the role of financial intermediaries.

This more detailed presentation of financial transactions by instrument and counterparty sector is known as *detailed flow of funds accounting*. This presentation cross-classifies financial assets acquired by each sector by instrument and the counterpart debtor sector. It also cross-classifies liabilities incurred by each sector by instrument and counterpart creditor sector. The level of sectoral detail presented depends on the needs of the country concerned. However, typically a detailed flow of funds presents data for each sector of the economy—with the financial corporations sector broken into subsectors (central bank, other depository corporations, other financial corporations, financial auxiliaries, and insurance corporations

[33]The macroeconomic statistical standards include tables and classifications that provide some of this additional information. For example, the classification of monetary statistics and the balance of payments identifies the domestic counterparty sector, and the *GFSM 2001* includes a table (Table 9.2) that classifies financial transactions by sector.

and pension funds)—allowing analysts to better assess the financial flows. This presentation also gives data for the rest of the world, as if it were an institutional sector. The interlocking row and column constraints within the matrix are an important check on the consistency of the data compilation, considerably increasing the data's usefulness for analysts.

Countries may also complement the detailed flow of funds statistics with data on the stocks of financial assets and liabilities cross-classified by sector and instrument. As described in the *MFSM* (Chapter 8), the entire set of stock and flow data, including not only the transactions (flow of funds) but also other flows, are referred to as financial statistics.