CHAPTER

3 Accounting Principles

A. Introduction

3.1 This chapter discusses the nature of basic entries in the international accounts and the accounting principles governing their recording. Entries in the international accounts are either flows or stocks. In the context of international accounts, stocks are called positions. The entries are recorded following a consistent set of accounting principles to ensure a complete integration of flows and positions as well as symmetry of recording between counterparties. This chapter first describes the important characteristics of flows and positions. It then explains the double-entry and quadruple-entry bookkeeping systems in the context of international accounts. Finally, the chapter describes general accounting principles concerning the time of recording, valuation, and aggregation and netting. Descriptions of specific types of flows and positions and the application of general accounting principles to their recording are discussed in relevant chapters.

B. Flows and Positions

References:

2008 SNA, Chapter 3, Stocks, Flows and Accounting Rules.

IMF, *Government Finance Statistics Manual* (*GFSM*) 2001, Chapter 3, Flows, Stocks, and Accounting Rules (Sections A–B).

3.2 *Flows refer to economic actions and effects of events within an accounting period, and positions refer to a level of assets or liabilities at a point in time.* International flows are recorded in the accounts as transactions (balance of payments) and other changes in financial assets and liabilities account. Flows and positions are integrated so that all changes in positions between two points in time are fully explained by the recorded flows. Positions and flows of financial assets and liabilities are grouped according to the functional and instrument classifications of financial assets and liabilities. Nonfinancial transactions are generally grouped according to their nature and characteristics. Positions of external financial assets and liabilities are shown in the international investment position. Descriptions of specific types of flows are discussed in the relevant chapters. The classification of financial assets and liabilities is discussed in Chapters 5 and 6.

1. Flows

3.3 *Flows reflect the creation, transformation, exchange, transfer, or extinction of economic value; they involve changes in the volume, composition, or value of an institutional unit's assets and liabilities.* This classification is the basis for the flow accounts, as discussed in Chapters 8–13. Flows also can be classified into (a) those that are associated with transactions and (b) other flows.

a. Transactions

3.4 *A transaction is an interaction between two institutional units that occurs by mutual agreement or through the operation of the law and involves an exchange of value or a transfer.* Transactions are classified according to the nature of the economic value provided—namely, goods or services, primary income, secondary income, capital transfers, nonproduced nonfinancial assets, financial assets, or liabilities. Chapters 8 and 10–13 deal with transactions. Mutual agreement means that there is prior knowledge and consent by the institutional units. Transactions imposed by force of law are applicable mainly to certain distributive transactions, such as the payment of taxes, fines, and penalties. Although taxes or penalties are imposed on individual institutional units by administrative or judicial decisions, there is collective recognition and acceptance by the community of the obligation to pay taxes and penalties. Because of the exchange of value, a transaction consists of two economic flows, one in each direction—for example, goods supplied by one

party in return for currency supplied by the other. The definition is extended to cover actions within an institutional unit that are analytically useful to treat as transactions, often because the unit is operating in two different capacities, such as where one part operates as a branch. The definition is also extended to cover unrequited transfers, by the identification of transfers as the corresponding flow to the economic value supplied. Transactions recorded in the international accounts are between two institutional units, one a resident of the compiling economy and the other a nonresident.[1]

3.5 Illegal transactions are treated the same way as legal actions. Illegal transactions are those that are forbidden by law. Illegal economic actions are transactions only when the institutional units involved enter the actions by mutual agreement. Otherwise, they are other flows. Macroeconomic statistics, including international accounts, cover all economic phenomena irrespective of whether they are illegal or legal. Differences in the definition of illegal transactions between economies or within an economy over time would cause inconsistencies in the international accounts if illegal transactions were omitted. Furthermore, illegal transactions generally affect other legal transactions (e.g., certain legal external financial claims may be created through illegal exports of goods). Thus, exclusion of illegal transactions could lead to an imbalance in the international accounts.

3.6 Transactions recorded in the balance of payments are interactions between a resident and a nonresident institutional unit. By the nature of international accounts, intra-unit transactions are not recorded. The flows between the branch and its parent enterprise are shown as interactions between institutional units, with a branch recognized as a separate institutional unit (a quasi-corporation). Similarly, when a notional enterprise (a quasi-corporation) is created for holding land and associated buildings by nonresident owners, the flows between the nonresident owners and the notional enterprise are considered interactions between institutional units.

3.7 Transactions between two resident institutional units in external assets are domestic transactions. Such transactions, however, affect the external asset positions of the two resident units involved. The external asset position of one resident unit is reduced and the position in the same external asset of another resident unit is increased, and thus leads to a change in domestic sectoral breakdown if the two parties are in different sectors. Such transactions result in changes in structure of external asset positions and should be recorded in the international accounts as a reclassification of sectors of holding (i.e., in the other changes in financial assets and liabilities account).[2] If both units fall in the same institutional sector, such reclassification entries cancel each other out and thus have no effect on sectoral positions. Similarly, when financial instruments issued by residents are exchanged between nonresidents, no transactions are recorded in the balance of payments and there is no change in overall external liabilities.[3]

3.8 To establish whether a transaction involving an external financial asset is a transaction between a resident and a nonresident, the compiler must know the identities of both parties. The information available on transactions in claims constituting external assets may not, however, permit identification of the two parties to the transaction. That is, a compiler may not be able to ascertain whether a resident, who acquired or relinquished a claim on a nonresident, conducted the transaction with another resident or with a nonresident, or whether a nonresident dealt with another nonresident or with a resident. As a result, recorded international transactions may include not only those that involve assets and liabilities and take place between residents and nonresidents but also those that involve financial assets of economies and take place between two residents and, to a lesser extent, transactions that take place between nonresidents. (See also paragraphs 4.152–4.153 on the additional issues associated with partner attribution of transactions in financial instruments between residents and nonresidents. In addition, transactions between residents in external assets and liabilities may have to be taken into account for specific purposes, particularly as described in paragraph 14.21.)

3.9 Some mutual agreements involve three parties. For example, guarantees involve the guarantor, the debtor, and the creditor. Transactions occurring between two parties (e.g., between the guarantor and debtor, or between the guarantor and creditor, or between the

[1]As stated in paragraph 3.6, however, notional institutional units are created to account for cross-border transactions that occur within a single corporation. In the national accounts, transactions cover also some actions within an institutional unit (intra-unit transactions) with the purpose of providing a more analytically useful picture of output, final uses, and costs. Examples include consumption of fixed capital, movements in inventories, and production for own final use of goods by producers.

[2]The resident-to-resident transaction between the buyer and seller is recorded in the national accounts.

[3]As discussed in paragraph A3.4, national contributions for compiling financial flows data in currency and economic unions may be allocated along the debtor-creditor approach as a way to ensure bilateral symmetry.

debtor and creditor) should always be identified and recorded as such. For one-off guarantees, the activation of the guarantee gives rise to transactions and, in some cases, other flows (for a definition and discussion of other flows, see paragraphs 3.19–3.22) between each of the three pairs of the three parties (see paragraphs 8.42–8.45 and 13.27 for the treatment of one-off guarantees). For each pair of parties, transactions in the international accounts are recorded if one party is a resident and another party is a nonresident.

3.10 Service activities may consist of one unit (an agent) arranging for a transaction to be carried out between two other units in return for a fee from one or both parties to the transaction. In such a case, the transaction is recorded exclusively in the accounts of the two parties engaging in the transaction and not in the accounts of the agent facilitating the transaction. Therefore, in the case of agents, transactions should be attributed to the economy of the principal on whose behalf a transaction is undertaken, and not to the economy of the agent acting on behalf of the principal. The accounts of the agent show only the fee charged to the principal for the facilitation services rendered (see also paragraph 4.149).

3.11 Each transaction involves two entries, a debit entry and a credit entry, for each party to the transaction. That is, each transaction consists of two flows and gives rise to two accounting entries for each party. (Given that each transaction involves two entries, a phrase such as a "goods transaction" may be more correctly called a "transaction involving goods" or "goods entry" or "goods flow.") Reclassification also involves two entries for each economy. All other flows that are not transactions or reclassification involve only one entry for each party as they directly affect net worth.

Types of transactions

3.12 Transactions take many different forms. Transactions can be classified according to whether they are exchanges or transfers (see paragraph 3.13) and whether they are monetary or nonmonetary (see paragraph 3.14). Furthermore, certain transactions are rearranged through rerouting and partitioning (see paragraphs 3.16–3.17), whereas other transactions may be imputed to reflect the underlying economic relationship (see paragraph 3.18).

Exchanges or transfers

3.13 Every transaction involves either an exchange or a transfer. An exchange involves the provision of something of economic value in return for a corresponding item of economic value. Purchases of goods and services, acquisition of assets, compensation of employees, dividends, and so on are all exchanges. An exchange is sometimes called a transaction with "something for something" or a transaction with a quid pro quo. A transaction involving a transfer involves a provision (or receipt) of an economic value by one party without receiving (or providing) a corresponding item of economic value. A transfer entry is used to provide a corresponding entry to the unrequited flow. Taxes, debt forgiveness, grants, and personal transfers are examples of transfers. A transaction involving a transfer is also called a transaction with "something for nothing" or a transaction without a quid pro quo.

Monetary or nonmonetary transactions

3.14 Every transaction is either a monetary or nonmonetary transaction. *A monetary transaction is one in which one institutional unit makes a payment (receives a payment) or incurs a liability (acquires an asset) stated in units of currency. A nonmonetary transaction is one not initially stated in units of currency by the transacting parties.* Nonmonetary transactions include barter transactions, remuneration in kind, payments in kind, compensation in kind, and transfers in kind. *In kind means that resources are provided in a form other than funds, such as goods, services, and interest forgone*. For example, provision of foreign aid goods is a transfer in kind. Because all flows are to be expressed in monetary terms, the monetary values of nonmonetary transactions need to be indirectly measured or otherwise estimated. The main distinguishing characteristic of a monetary transaction is that the parties to the transaction express their agreement in monetary terms, such as a given amount of units of a currency per unit of a good. Both monetary and nonmonetary transactions may be either exchanges or transfers.

Rearranging transactions for statistical purposes

3.15 Most transactions can be clearly observed because the way they take place also reflects the underlying economic relationships. Some transactions (as they appear to the institutional units) do not reflect the underlying economic relationships, however, and need to be rearranged so that the accounts portray economic reality. Rerouting, partitioning, and imputation are three types of rearrangements employed in the international accounts.

Rerouting

3.16 Rerouting records a transaction as taking place in channels different from those observed. For example, a direct transaction between unit A and unit C may

be best understood as a transaction first between unit A and unit B and second between unit B and unit C. This most often occurs when a unit that is a party to a transaction does not appear in the actual accounting records because of administrative arrangements. Social contributions paid by employers directly to a retirement scheme are one such example (see paragraphs 12.32–12.39 for recording of social contributions). The economic substance of such a transaction is revealed by rerouting: showing the social contributions as part of compensation of employees that is payable by employers to employees, who then make social contributions to the retirement scheme. Similarly, the transfer elements of lotteries and other gambling are transactions through the gambling operator, but they are rerouted to occur directly between those participating in the lottery or gambling, that is, between households and possibly to charities (see paragraph 12.25).

Partitioning

3.17 Partitioning unbundles two or more different transactions that appear as a single transaction from the perspective of the parties involved. For example, interest payable and receivable by financial intermediaries is partitioned into two components. One component represents the return on investment (pure interest), while the remainder represents the purchase of financial intermediation services for which the intermediaries do not explicitly charge (see paragraphs 10.126–10.136 for measuring financial intermediation services). Likewise, when a financial derivative is settled with the delivery of the underlying asset, this single event should be broken down into a transaction in the financial derivative and a separate transaction in the underlying asset. One example of partitioning and rerouting is the valuation of goods at FOB (free on board) values, with transportation and insurance services separately recorded (see paragraph 10.34 for CIF (cost, insurance, and freight) and FOB adjustments).

Imputation

3.18 Imputation of transactions refers to constructing entries in the accounts when no separate transactions are identified by the parties involved. As a general rule, transactions are to be imputed only in specific cases to reflect underlying economic relationships. Imputation of transactions in the international accounts is made in the following specific cases:

(a) Retained earnings of direct investment enterprises are attributed to direct investors as if the retained earnings had been distributed in proportion to direct investors' shares in the earnings of the direct investment enterprises and then reinvested by them in the direct investment enterprise. The rationale behind this treatment is that, because a direct investment enterprise is, by definition, subject to control or influence by a direct investor or investors, the decision to retain some of its earnings within the enterprise represents an investment decision on the part of the direct investor(s). The treatment of the retained earnings of direct investment enterprises are described in paragraphs 11.40–11.47.

(b) Investment income earned on technical reserves held by insurance corporations is deemed to be payable to policyholders who are then deemed to return the funds back to insurance corporations as premium supplements even though in terms of actual cash flows the property income is retained by the insurance corporations. The same treatment is followed for the income earned by investing the technical reserves for standardized guarantees. Investment income earned on the technical reserves held by life insurance corporations and defined contribution pension schemes as well as the increase in entitlements during the period for defined benefits pension schemes are also deemed to be payable to policyholders who are then deemed to acquire financial claims on the life insurance corporations and pension funds. The technical reserves are liabilities of insurance corporations, guarantors, and pension funds and assets of policyholders. Therefore, the investment income attributable to policyholders provides a measure of income receivable by the policyholders on their claims. This imputation provides a more suitable picture of the disposable income of policyholders, of their saving, and of production and trade in insurance services.

(c) Retained earnings of investment funds are treated as if they were distributed to shareholders who are then deemed to reinvest in the investment fund. The treatment and recording of these transactions are explained in paragraphs 11.37–11.39.

(d) When government has a nonresident entity undertake fiscal functions related to government borrowing or incurring government outlays abroad with no or incomplete economic flows between the government and the nonresident entity related to these fiscal activities, transactions are imputed in the accounts of both the

government and the nonresident entity to reflect the fiscal activities of the government. Imputations of these transactions are described in paragraphs 8.24–8.26, 11.40, and 12.48.

(e) Implicit taxes or subsidies associated with a multiple exchange rate regime are discussed in paragraph 3.107.

b. Other flows

3.19 *Other flows are changes in the volume, value, or classification of an asset or liability that do not result from a transaction between a resident and a nonresident.* Other flows are genuine economic phenomena and capture changes in assets and liabilities between opening and closing positions that are not due to transactions. In the context of international accounts, other flows are recorded only for financial assets and liabilities that represent claims on and liabilities to nonresidents and gold bullion (see paragraph 3.24), because the international investment position relates only to external financial assets and liabilities.

3.20 Other flows cover various kinds of changes in assets and liabilities that are recognized analytically under two broad types:

(a) *Other changes in the volume of assets and liabilities reflect entrances of new assets into balance sheets and exits of existing assets and liabilities from balance sheets that are not caused by interactions by mutual agreement between institutional units (i.e., transactions).*

(b) *Revaluations (holding gains and losses) on an asset or liability arise from changes in their prices and/or the exchange rates.* In international accounts, revaluations are further classified into those that are due to exchange rate changes and those that are due to other price changes.

3.21 Other changes in the volume of assets and liabilities are recorded when either:

(a) new assets that were not in the opening balance sheet appear in closing balance sheet,

(b) or existing assets that were in the opening balance sheet disappear from the closing balance sheet,

(c) and these appearances or disappearances are not the result of transactions.

Included are write-offs of claims by creditors, reclassification of assets, monetization and demonetization of gold bullion, and other events. If debt forgiveness is provided, such as in a noncommercial setting, transactions are recorded (see paragraphs 13.22–13.23). In the case of debt cancellations, it may sometimes be unclear whether they should be classified as transactions or other flows. In commercial settings, in the absence of specific information, debt cancellation can be treated as other changes in the volume of assets (see also paragraphs 9.8–9.11). Changes in the status of existing financial claims and liabilities arising from the change in residence of individuals from one economy to another are treated as other changes in the volume of assets. These flows result from a change in the classification of the owner's residence status, and hence, they should not be classified as transactions (see also paragraphs 9.21–9.23). Assumption of debts arising from the activation of guarantees and rescheduling of debts and are the results of mutual agreements between the parties and, hence, are classified as transactions (see paragraphs 8.42–8.45 and 8.54, respectively).

3.22 A separate account (other changes in financial assets and liabilities account) shows changes in assets and liabilities due to other flows. Chapter 9 describes the structure of this account as well as various categories of other flows and their treatment.

2. Positions

3.23 *Positions refer to the level of financial assets or liabilities at a point in time.* They are recorded in the international investment position, which is a balance sheet of external financial assets and liabilities. Generally, positions are shown at the beginning and end of an accounting period. Positions between two periods are connected with flows during that period because changes in positions are caused by transactions and other flows.

3.24 Financial assets are economic assets that are financial instruments. Financial assets include financial claims and, by convention, monetary gold held in the form of gold bullion (including gold held in allocated gold accounts). A financial claim is a financial instrument that has a counterpart liability. Gold bullion is not a claim and does not have a corresponding liability. It is treated as a financial asset, however, because of its special role as a means of financial exchange in international payments by monetary authorities and as a reserve asset held by monetary authorities.

3.25 The international investment position covers financial assets and liabilities that have an international character. All financial claims involve two parties, so

they have an international character if the claim is on a nonresident. Similarly, all liabilities involve two parties, so they have an international character if the obligation is to a nonresident. International investment position is described in Chapter 7.

C. Accounting System

References:

2008 SNA, Chapter 2, Overview.

Gorter, Cornelis N., and Manik L. Shrestha, "Bookkeeping Conventions and the Micro-Macro Link," *Review of Income and Wealth*, Vol. 50, June 2004.

3.26 The accounting system underlying the international accounts derives from broad bookkeeping principles. To understand the accounting system for international accounts, three bookkeeping principles can be distinguished:

(a) vertical double-entry bookkeeping (also known in business accounting as simply double-entry bookkeeping);

(b) horizontal double-entry bookkeeping; and

(c) quadruple-entry bookkeeping.

Vertical double-entry bookkeeping—corresponding entries

3.27 The main characteristic of vertical double-entry bookkeeping is that each transaction leads to at least two corresponding entries, traditionally referred to as a credit entry and a debit entry, in the books of the transactor. The international accounts for an economy are to be compiled on a vertical double-entry bookkeeping basis from the perspective of the residents of that economy. Because each transaction is either an exchange or a transfer, it requires two entries. This principle ensures that the total of all credit entries and that of all debit entries for all transactions are equal, thus permitting a check on consistency of accounts for a single unit. Reclassifications also lead to debit and credit entries. Other flows have their corresponding entries directly in changes in net worth. As a result, vertical double-entry bookkeeping ensures the fundamental identity of a unit's balance sheet, that is, the total value of assets equals the total value of liabilities plus net worth. The total value of the assets owned by an entity minus the total value of liabilities provides net worth. In the international accounts, net international investment position provides a measure of net financial claims with nonresidents plus gold bullion held as monetary gold. These terms are discussed in paragraphs 7.1–7.2.

Horizontal double-entry bookkeeping—counterpart entries

3.28 The concept of horizontal double-entry bookkeeping is useful for compiling accounts that reflect the mutual economic relationships between different institutional units in a consistent way. It means that if unit A provides something to unit B, the accounts of both A and B show the transaction for the same amount: as a payment in A's account and as a receipt in B's account. Horizontal double-entry bookkeeping ensures the consistency of recording for each transaction category by counterparties. For example, at the worldwide level, dividends payable by all economies should be equal to dividends receivable by all economies.

Quadruple-entry bookkeeping

3.29 The simultaneous application of both the vertical and horizontal double-entry bookkeeping results in a quadruple-entry bookkeeping, which is the accounting system underlying the recording of transactions in the national accounts and international accounts. Additionally, definitions, classifications, and accounting principles in the international accounts are derived from the viewpoint of conceptual symmetry as well as symmetric reporting by partner economies. The quadruple-entry system deals in a coherent way with multiple transactors or groups of transactors, each of which practices vertical double-entry bookkeeping. A single transaction between two counterparties thus gives rise to four entries. In contrast to business bookkeeping, international accounts deal with interactions among a multitude of units in parallel and thus require special care from a consistency point of view. As a liability of one unit is mirrored in a financial asset of another unit, for instance, they should be identically valued, allocated in time, and classified to avoid inconsistencies in aggregating balance sheets of units into regional or global totals. The same is also true for all transactions and other flows that affect balance sheets of two counterparties. The quadruple approach to transactions in the international accounts is needed for bilateral comparisons and global integrated data.

Types of accounting entries

3.30 The international accounts use the following conventions and terminologies for recording flows. In the current and capital accounts, a credit denotes entries

from exports, primary income receivable, transfers receivable, and disposals of nonproduced nonfinancial assets. A debit is used to record entries for imports, primary income payable, transfers payable, and acquisitions of nonproduced nonfinancial assets.

3.31 In the case of transactions in financial assets and liabilities, the terms "net acquisition of financial assets" and "net incurrence of liabilities" are used. Financial account items are recorded on a net basis separately for each financial asset and liability (i.e., they reflect changes due to all credit and debit entries during an accounting period). The use of the terms "net acquisition of financial assets" and "net incurrence of liabilities" highlights the impact of the financial account on the international investment position. The use of these terms also simplifies the interpretation of data. A positive change indicates an increase in assets or liabilities and a negative change indicates a decrease in assets or liabilities. The interpretation of increase or decrease under the credit or debit notion, however, depends on whether the increase or decrease refers to assets or liabilities (a debit for an asset is an increase; a debit for a liability is a decrease). Although the debit and credit presentation is not emphasized for the financial account transactions, it is important to recognize and maintain the accounting identities. For example, a credit is always conceptually matched with a corresponding debit, the latter relating to either an increase in an asset or a reduction in a liability (see Box 2.1). The conventions for aggregation, consolidation, and netting assets against liabilities are described in Section F.

D. Time of Recording of Flows

References:

2008 SNA, Chapter 3, Stocks, Flows and Accounting Rules.

IMF, *GFSM 2001*, Chapter 3 (Section C), Flows, Stocks, and Accounting Rules.

IMF, *Monetary and Financial Statistics Manual (MFSM) 2000*, paragraphs 225–228.

IMF, *External Debt Statistics: Guide for Compilers and Users*, Box 2.1, The Choice of a Recording Basis: The Case for Accrual Accounting.

3.32 Once a flow is identified, the time at which it occurred must be determined so that the value of all flows within a given accounting period can be compiled. The international accounts do not show individual transactions or other flows, but there are several reasons why precise rules on their individual timing must be given. First, rules have to be formulated to determine in which accounting period the discrete flows are to be recorded. Second, an exact timing of individual flows within the accounting period is crucial to make the distinction between changes in net worth due to transactions and those due to other changes (e.g., other changes in volume and revaluations). Third, the integrated nature of the system means that the positions recorded on the balance sheet are influenced by the timing of flows. Finally, the quadruple accounting system requires that entries for a transaction are made by the counterparties at the same time. This ensures the consistency of accounts for each party (e.g., consistency between the merchandise item and the corresponding financial account entries) as well as the symmetry of recording by partner economies.

3.33 One of the problems in determining the timing of transactions is that activities of institutional units often stretch over periods in which several important moments can be distinguished. For instance, exports and imports of goods commence with the signing of a contract between a seller and a buyer; encompass dates of crossing borders, a date of delivery, and a date or dates on which payments become due; and are completed only when the last payment is received by the seller. Each of these distinct moments in time is, to some extent, economically relevant and may result in multiple transactions in the international accounts. As explained in the following paragraphs, each transaction should be recorded according to the accrual basis, which determines the time period to which it shold be attributed.

1. Alternative recording bases

3.34 Broadly, the time of recording could be determined on four bases: the accrual basis, the due-for-payment basis, the commitment basis, and the cash basis. Other timing bases, such as physical movement or administrative process, may be used in some data sources. The accrual basis is used in the international accounts as well as in other major macroeconomic statistical systems (e.g., national accounts, government finance, and monetary and financial statistics).

3.35 *Accrual accounting records flows at the time economic value is created, transformed, exchanged, transferred, or extinguished.* This means that flows that imply a change of economic ownership are recorded when ownership passes and services are recorded when provided. In other words, the effects of economic events are recorded in the period in which they occur, irrespective of whether cash was received or paid or was due to

be received or paid. When an economic event is accompanied by a settlement at a later date, such as an import of goods with trade credit, the time lag is bridged by recording each event separately, the corresponding entry at the time of import being trade credit payable.

3.36 *A due-for-payment basis records flows that give rise to cash payments at the time the payments fall due*. If a payment is made before it is due, then the flows are recorded when the cash payment is made.

3.37 *A commitment basis records flows when a unit has committed itself to a transaction*. Normally, this basis may be envisaged only for acquisition of financial assets or incurrence of liabilities, and purchases of goods, services, and labor inputs. The time of recording generally is when a commitment is made or a purchase order is issued.

3.38 *A cash basis records flows when cash is received or disbursed*. In its strict form, only those flows that involve cash as the medium of exchange are included.

2. Use of accrual basis in the international accounts

3.39 The *Manual* recommends use of the accrual basis for determining the time of recording of flows. The accrual basis matches the time of recording with the timing of the events giving rise to the actual resource flows. With the cash basis, the time of recording would potentially diverge significantly from the time of the economic activities and transactions to which the cash flows relate. The due-for-payment basis would usually record transactions after the resource flows have taken place, although the long delays caused by the cash basis would, in most cases, be reduced. The timing of the commitment basis would precede the actual resource flows.

3.40 The accrual basis provides the most comprehensive information because all resource flows are recorded, including nonmonetary transactions, imputed transactions, and other flows. Such a comprehensive recording ensures the integration of flows and changes in balance sheets. The accrual basis is consistent with the way transactions, other flows, and main economic aggregates (balance on goods and services, net lending/net borrowing) are defined. It is also close to business accounting.

a. Time of recording of transactions

3.41 The change of economic ownership is central in determining the time of recording on an accrual basis for transactions in goods, nonproduced nonfinancial assets, and financial assets. The term "economic ownership" reflects the underlying reality economic accounts are attempting to measure. Economic ownership takes account of where the risks and rewards of ownership lie. The concepts of economic ownership and associated risks and rewards are further elaborated in paragraph 5.3. A change in ownership from an economic point of view means that all risks, rewards, and rights and responsibilities of ownership in practice are transferred. In general, a change in "legal ownership" also involves a change in economic ownership. In some cases, a change of "economic ownership" takes place even though the "legal ownership" remains unchanged (e.g., financial leases and transactions between an enterprise and its foreign branches). In other cases, there is no change in economic ownership, even though there is a change in legal ownership. For example, for repurchase agreements involving the provision of securities for cash, the risks and rewards attached to the securities remain with the original holder (as discussed in paragraphs 5.52–5.54) and the only transaction is a loan. Similarly, in the case of securities lending without cash collateral, there is no change in ownership of the securities, although securities lending fees may arise (see paragraphs 11.67–11.68).

3.42 Entries for transactions in goods, nonproduced nonfinancial assets, and financial assets owned by institutional units are made at the time economic ownership of the underlying asset is transferred. When a change in economic ownership is not obvious, the change is considered to occur at (or is proxied by) the time the parties to the transaction record it in their books or accounts.

3.43 General principles for applying the accrual basis for time of recording to various flows are described in paragraphs 3.44–3.66. More specific descriptions of the accrual basis are detailed in relevant chapters.

Application to goods

3.44 *Transactions in goods should be recorded as of the time that the change of economic ownership takes place*. Goods are considered to change economic ownership when the parties enter the goods in their books and make a corresponding change to their financial assets and liabilities. For high-value capital goods such as ships, heavy machinery, and other equipment, ownership changes are recorded at the time agreed between the parties as to when ownership changes (see paragraph 10.28). When a contract for building and other construction is agreed in advance, progressive change of ownership occurs for the work-in-progress, which may take several months or years to complete. When the contract calls for stage payments (progress pay-

ments), the transaction values may often be approximated by the value of stage payments made each period (see paragraphs 5.71 and 10.107). A difference in timing between the change of ownership and payments may give rise to trade credit and advances.

3.45 The timing used in international merchandise trade statistics generally follows customs procedures, which are set up to record the movement of goods across borders. The time at which goods cross the border can be taken only as an approximation to the time when the change of economic ownership occurs. A customs-based collection system usually provides a choice of dates at which transactions may be recorded (e.g., lodgment of customs declaration, customs clearance of goods). The time of recording in the international guidelines for merchandise trade statistics is when the customs declaration is lodged. Ideally, for international accounts purposes, customs data should be adjusted (see paragraphs 3.61–3.66). Likewise, an exchange record system that reflects payments may not coincide in timing with the change in economic ownership of the goods.

3.46 Goods on consignment (i.e., goods intended for sale but not actually sold when the goods cross the frontier) should be recorded only at the time economic ownership changes. Goods under financial lease arrangements are considered to change economic ownership at the inception of the lease (see paragraph 5.56 on the definition of a financial lease and paragraphs 7.57 and 10.17(f) for positions and transactions arising from financial leases). Goods sent abroad for processing under the ownership of the same party are not treated as if they change economic ownership. Goods may move between a parent and its branch abroad. In that case, possibilities exist that either the goods have changed economic ownership or they may have been sent for processing. The correct statistical treatment is to identify which location assumes the risks and rewards of ownership most strongly (e.g., from factors such as whether the goods are included in the accounts, and which location is responsible for subsequent sale of the goods). For goods under merchanting, purchases and resales are recorded at the time the change in economic ownership of goods occurs.

Application to services

3.47 *Transactions in services are recorded when the services are provided*. Some services, such as some transport or hotel services, are provided within a discrete period, in which cases, there is no problem in determining the time of recording. Other services are supplied or take place on a continuous basis. For example, construction services, operating leasing, and insurance services are recorded continuously as long as they are being provided. When construction takes place with a prior contract, the ownership of the structure is effectively transferred progressively as the work proceeds. When services are provided over a period of time, there may be advance payments or settlements at later dates for such services (e.g., freight, insurance, port services). The provision of services should be recorded on an accrual basis in each accounting period (i.e., they should be recorded as they are rendered, not when payments are made). Entries for advance payments or settlements at later dates should be made in the appropriate accounts when they occur (as explained in paragraph 3.35 in the case of import of goods).

Application to primary income and transfers

3.48 *Distributive transactions are recorded at the moment the related claims arise*. As a result, for example, compensation of employees, interest, social contributions and benefits are all recorded in the period during which the amounts payable accrue. (See paragraphs 11.20–11.21 for the recording of compensation of employees associated with employee stock options.) With respect to some distributive transactions, the time of accrual depends on the unit's decision as to when to distribute primary income or make a transfer. Dividends are recorded at the moment the shares go ex-dividend. Three dates are associated with dividends:

(a) the date they are declared;

(b) the date they are excluded from the market price of shares, known as the ex-dividend date. The recipients of the dividends are determined from the register of shareholders at this time and subsequent shareholders do not have a right to the dividends; and

(c) the date they are settled.

Although dividends sometimes may be related to the enterprise's profits in the previous period, in other cases, they are only loosely related or not at all. The price of shares includes declared dividends up to the ex-dividend date, thus the holder of the shares before the ex-dividend date owns the share and does not hold a separate debt instrument reflecting declared and unpaid dividends. Between the ex-dividend date and actual settlement, the amount payable is recorded as other accounts receivable/ payable. Withdrawals from income of quasi-corporations, such as distributed branch profits, are recorded when they actually take place. Reinvested earnings are derived from retained earnings,

and therefore they are recorded in the period in which retained earnings accrue. (See paragraphs 11.33–11.47 for issues in the calculation of reinvested earnings.)

3.49 Interest is recorded as accruing on a continuous basis because the financial resources are provided for use on a continuous basis. For some financial instruments, the debtor does not make any payments to the creditor until the financial instrument matures, at which time a single payment discharges the debtor's liability; the payment covers the amount of funds originally provided by the creditor and the interest accumulated over the entire life of the financial instrument. Corresponding entries to the interest accruing in each period before maturity should be recorded as financial transactions that represent an additional acquisition of the financial asset by the creditor and an equal incurrence of a liability by the debtor.

3.50 Taxes and other compulsory transfers should be recorded when the activities, transactions, or other events occur that create the government's claim to the taxes or other payments. In principle, income taxes and social contributions based on income should be attributed to the period in which the income is earned. In practice, however, some flexibility may be needed so that income taxes deducted at the source and regular prepayments of income taxes may be recorded in the periods in which they are paid, and any final tax liability on income may be recorded in the period in which it is determined.

3.51 Some compulsory transfers, such as fines, penalties, and property forfeitures, are determined at a specific time. These transfers are recorded when a legal claim is established, which may occur when a court renders judgment or an administrative ruling is published.

3.52 Determining the time of recording for grants and other voluntary transfers can be complex because there is a wide variety of eligibility conditions that have varying legal powers. In some cases, a potential grant recipient has a legal claim when it has satisfied certain conditions, such as the prior incurrence of expenses for a specific purpose or the passage of legislation. These transfers are recorded when all requirements and conditions are satisfied. In other cases, the grant recipient never has a legal claim on the donor, and the transfer should be attributed to the time at which the settlement is made (e.g., cash payment). In general, the time of recording of voluntary transfers is determined by the time at which there is a change in the economic ownership of the resources (such as goods, services, or financial assets) that are corresponding entries to transfers.

Application to transactions in nonproduced nonfinancial assets

3.53 Transactions in nonproduced nonfinancial assets are recorded at the time economic ownership of these assets changes. The treatment is similar to those for goods and financial assets, as discussed in paragraphs 3.44 and 3.54–3.55, respectively.

Application to transactions in financial assets

3.54 *Transactions in financial assets (including payments of cash) are recorded when economic ownership changes.* Some financial assets, such as trade credit, are the implicit result of a nonfinancial transaction. In these cases, the financial claim is deemed to arise at the time the corresponding nonfinancial transaction occurs. In some cases, the parties to a transaction may perceive ownership to change on different dates because they acquire the documents evidencing the transaction at different times. This variation usually is caused by the process of clearing, or the time checks are in the mail. The amounts involved in such "float" may be substantial in the case of transferable deposits and other accounts receivable or payable. If no precise date can be fixed, the timing of the transaction is determined according to the date on which the creditor receives payment or some other financial claim.

3.55 Transactions in securities are recorded at the time ownership changes, which determines the transaction date. Both parties should record the transactions at the time ownership changes, not when the underlying financial asset is delivered. If settlement occurs after the ownership has changed, this gives rise to accounts receivable/payable. In practice, when the delay between the transaction and settlement is short, the time of settlement may be considered as an acceptable proxy, so that accounts receivable/payable would not arise. In cases of longer delays, however, accounts receivable/payable should be identified.

3.56 According to the accrual basis, repayments of debts are recorded when they are extinguished (such as when they are paid, rescheduled, or forgiven by the creditor). When arrears occur, no transactions should be imputed, but the arrears should continue to be shown in the same instrument until the liability is extinguished. However, if the contract provided for a change in the characteristics of a financial instrument when it goes into arrears, this change should be recorded as a reclas-

sification in the other changes in the financial assets and liabilities account. The reclassification applies to situations in which the original contract remains, but the terms within it change (e.g., interest rates, repayment periods). If the contract is renegotiated or the nature of the instrument changes, as agreed between the parties, from one instrument category to another (e.g., from bonds to equity), the consequences are to be recorded as new transactions. Consistent with the accrual principle, an overdue obligation to settle a financial derivative contract is not recorded as a transaction; however, the obligation is reclassified to a debt liability because of the change in the nature of the claim (see paragraph 5.82).

3.57 Data on arrears are important in their own right, and thus should be presented as supplementary items, where significant (or memorandum items in the case of Exceptional Financing, see Appendix 1). Although it is useful to identify some commonly important arrears (such as arrears on public and publicly guaranteed debt), flexibility is needed in determining which items of arrears are important to disseminate, depending on each economy's circumstances. Arrears are described further in paragraphs 5.99–5.102.

3.58 Activation of one-off (nonstandardized) guarantees gives rise to financial transactions because this involves a creation of a new liability. The time of recording of flows arising from activation of one-off guarantees (including capital transfers and other changes in the volume of assets, if applicable) is determined by the occurrence of the events activating the guarantee. The treatment of flows arising from the activation of one-off guarantees is described in more detail in paragraphs 8.42–8.45.

3.59 Employee stock options are recognized at grant date. Compensation of employees associated with employee stock options should be recorded as accruing over the period to which the option relates, which generally is the period between the granting and vesting dates. Sometimes, the options may cover the period before the granting date, which should also be taken into account when allocating the compensation of employees.

b. Time of recording of other flows

3.60 Other flows include other changes in the volume of assets and revaluations. Other changes in the volume of assets are usually discrete events that accrue at precise moments or within fairly short periods of time. Other changes in the volume of assets, including reclassifications, are recorded as these changes occur. Revaluations can occur continuously as prices and exchange rates change. In practice, revaluations are usually computed between two points in time at which the relevant assets and liabilities are valued.

3. Timing adjustments

3.61 Differences in the time of recording by partner economies may occur because of various factors. One of the intrinsic problems in the international transactions is the difference in time zones. Differences in time of recording may arise from delays in mail deliveries or settlement clearing processes. Several data sources may often only approximate the required basis. It is important to make timing adjustments in cases in which major divergences occur from the required basis.

3.62 In choosing among available statistical sources, compilers may wish to consider the advantage of using data for which the correct timing is already recorded. For example, records of actual drawings on loans are preferable to sources that quote authorization dates or program dates that may not be realized.

3.63 Timing adjustments to international merchandise trade statistics may be necessary because these statistics may not reflect changes in economic ownership. Moreover, they may not always reflect physical movements correctly. Timing adjustments should be made when practices in customs statistics lead to distortions. For example, in the case of the purchase or sale of ships and aircrafts, information on the time at which the goods are entered in the books of the supplier or customer could be used. It is a good practice to identify the timing of large individual shipments or transactions (such as a ship or aircraft) to ensure that the goods flow and corresponding financing transactions are recorded in the same period.

3.64 A change in the economic ownership of goods can vary widely from the time at which the goods are recorded in trade statistics, if a lengthy voyage is part of the process of importing or exporting. If the unit value of trade changes substantially from the beginning to the end of the reporting period, the possible difference of one or more months between the shipment or receipt of goods and the change of ownership can be a source of error in the statement for a particular economy and a source of asymmetries between partner economies. Inquiries, perhaps on a sample basis, are required to ascertain specific practices, and timing adjustments should, in principle, be applied to correct the trade statistics for those classes of goods that are found to change ownership at times

other than those at which the goods were recorded in the trade statistics.

3.65 Goods on consignment may often be recorded at the time the goods cross the frontier, on the assumption that a change of ownership has occurred or will shortly occur. If that treatment is followed and there is no change of ownership, adjustments will have to be made, preferably by revising the original entries. In practice, these adjustments may be made in the periods when the goods are returned, if goods returned involve minor cases.

3.66 Information based on exchange records provides data on a cash basis. For certain transactions, cash and accrual bases for recording may be the same, but for many they will differ. In particular, transactions in goods, services, and income may not coincide with the corresponding payments for settling the transactions. Alternative information should be used routinely to verify or adjust selected transaction categories. Compilers using an exchange record system should check each large settlement transaction. Information on interest from either the payments records or debt service schedule may not be appropriate for accrual accounting. Other possibilities of deriving interest accrual, such as using the data on positions and contractual interest rates, should be explored and implemented.

E. Valuation

References:

2008 SNA, Chapter 3, Stocks, Flows and Accounting Rules.

IMF, *GFSM 2001*, Chapter 3, Flows, Stocks, and Accounting Rules.

IMF, *External Debt Statistics: Guide for Compilers and Users*, paragraphs 2.31–2.52, 6.12.

3.67 *Market prices refer to current exchange value, that is, the values at which goods and other assets, services, and labors are exchanged or else could be exchanged for cash*. Market prices are the basis for valuation in the international accounts. This section describes the general principles for valuation of flows and positions. Valuation of specific types of flows and positions are discussed in further detail in relevant chapters.

1. Valuation of transactions

3.68 *Market prices for transactions are defined as amounts of money that willing buyers pay to acquire something from willing sellers*; the exchanges are made between independent parties and on the basis of commercial considerations only—sometimes called "at arm's length." Thus, according to this strict definition, a market price refers only to the price for one specific exchange under the stated conditions. A second exchange of an identical unit, even under circumstances that are almost exactly the same, could result in a different market price. A market price defined in this way is to be clearly distinguished from a price quoted in the market, a world market price, a going price, a fair market price, or any price that is intended to express the generality of prices for a class of supposedly identical exchanges rather than a price actually applying to a specific exchange. Furthermore, a market price should not necessarily be construed as equivalent to a free market price—that is, a market transaction should not be interpreted as occurring exclusively in a purely competitive market situation. In fact, a market transaction could take place in a monopolistic, monopsonistic, or any other market structure. Indeed, the market may be so narrow that it consists of the sole transaction of its kind between independent parties.

3.69 Actual exchange values in the contract between two parties in most cases will represent market prices as described in the preceding paragraph, regardless of taxes and subsidies. Paragraphs 3.77–3.79 describe cases in which actual exchange values do not represent market prices. Transactions that involve dumping and discounting represent market prices. Market price is the price payable by the buyer after taking into account any rebates, refunds, adjustments, and so on from the seller. Imports and exports of general merchandise are recorded at FOB values, which take into account any export taxes payable or any tax rebates receivable.

3.70 Transactions in financial assets and liabilities are recorded according to the general principles described in paragraph 3.68. In particular, transactions in loans, deposits, and other accounts receivable/payable also should be valued at market prices. Transactions in financial assets and liabilities should be recorded exclusive of any commissions, fees, and taxes whether charged explicitly, included in the purchaser's price, or deducted from the seller's proceeds. This is because both debtors and creditors should record the same amount for the transaction in the same financial instrument. The commissions, fees, and taxes should be recorded separately from the transaction in the financial asset and liability, under appropriate categories. The valuation of transactions in financial instruments,

which excludes commission charges (recorded as transactions in services), differs from the valuation of nonfinancial asset transactions, which includes any costs of ownership transfer unless paid separately.

3.71 When market prices for transactions are not observable, valuation according to market-equivalent prices provides approximation to market prices. In such cases, market prices of the same or similar items when such prices exist will provide a good basis for applying the principle of market prices. Generally, market prices should be taken from the markets in which the same or similar items are traded currently in sufficient numbers and in similar circumstances. If there is no appropriate market in which a particular good or service is currently traded, the valuation of a transaction involving that good or service may be derived from the market prices of similar goods and services by making adjustments for quality and other differences.

3.72 Some cases in which market prices are not available or pose specific problems include barter transactions, provision of goods and services without a charge, and goods under financial lease. If a buyer and a seller engage in a barter transaction—the exchange of goods or services for other goods, services, or assets (of equal value)—the goods or services bartered should be valued at the prices that would have been received if the goods or services had been sold in the market. Similarly, a grant and donation in kind can be valued using the market price of the goods or services at the time of transfer. Cost of acquisition also may be used in certain situations, particularly when there is no time lag between the acquisition and the transfer. Acquisition of goods under financial lease should be valued at market prices at the time of acquisition, if such prices are available. When no price is determined, it may be necessary to use the estimated written-down current acquisition values of fixed assets or the present value of expected future returns.

3.73 Market valuation also poses problems for transactions in goods in which the contracts establish a quotation period often months after the goods have changed hands. In such cases, market value at the time of change of ownership should be estimated, which should be revised with the actual market value, when known. Market value is given by the contract price regardless of whether it is unknown at the time of change of ownership.

3.74 Values of imputed transactions will have to be derived from values of other observed transactions to which they are related. For example, values of transactions in reinvested earnings are derived from the direct investors' shares in the net saving of the direct investment enterprise before reinvested earnings are distributed. Reinvested earnings and the recording of related financial account entries are described in paragraphs 8.15–8.16 and 11.33–11.47.

3.75 When nonfinancial resources are provided, without a quid pro quo, to nonresidents by the government or private nonprofit institutions of an economy, the same values must be reflected in the international accounts of both recipient and donor. In conformity with the general principles, such resources should be valued at the market prices that would have been received if the resources had been sold in the market. The donor's view of the imputed value of the transaction may be quite different from that of the recipient. The suggested rule of thumb is to use the value assigned by the donor as a basis for recording.

3.76 In some cases, actual exchange values may not represent market prices. Examples are transactions involving the following: transfer pricing between affiliated enterprises; manipulative agreements with third parties; and certain noncommercial transactions, including concessional interest. Prices may be under- or overinvoiced (i.e., shown at a price other than the actual price, for instance, to evade taxes or exchange controls), in which case, an assessment of a market-equivalent value needs to be made. An adjustment should be made when actual exchange values do not represent market prices, but this may not be practical in many cases. Adjusting the actual exchange values to reflect market prices will have consequences in other accounts. Therefore, when such adjustments are made, corresponding adjustments in other accounts also should be made; for example, if prices of goods are adjusted, associated income account or financial account transactions also should be adjusted.

3.77 Transfer pricing refers to the valuation of transactions between affiliated enterprises. In some cases, transfer pricing may be motivated by income distribution or equity buildups or withdrawals. Replacing book values (transfer prices) with market-equivalent values is desirable, in principle, when the distortions are large and when availability of data (such as adjustments by customs or tax officials or from partner economies) makes it feasible to do so. Selection of the best market-equivalent values to replace book values is an exercise calling for cautious and informed judgment. The treatment of transfer pricing between affiliated enterprises is elaborated in paragraphs 11.101–11.102.

3.78 The exchange of goods between affiliated enterprises often may be one that does not occur between

independent parties (e.g., specialized components that are usable only when incorporated in a finished product). Similarly, the exchange of services, such as management services and technical know-how, may have no near equivalents in the types of transactions in services that usually take place between independent parties. Thus, for transactions between affiliated parties, the determination of values comparable to market values may be difficult, and compilers may have no choice other than to accept valuations based on explicit costs incurred in production or any other values assigned by the enterprise. The valuation of management fees and other similar cases is elaborated in paragraph 10.150.

3.79 Some noncommercial transactions, such as a grant in kind, have no market price; however, other noncommercial transactions may take place at implied prices that include some element of grant or concession, so that those prices also are not market prices. Examples of such transactions could include negotiated exchanges of goods between governments and government loans bearing lower interest rates than those with similar grace and repayment periods or other terms for purely commercial loans. Concessional lending is described in paragraph 12.51. In principle, an adjustment should be made, although this may not be practical in many cases, to record these transactions at market prices and a transfer is recorded for the difference between the implied price and the market price. Transactions by general government bodies and private nonprofit entities not engaged in purely commercial undertakings are often subject to noncommercial considerations. Transfers involving the provision of goods and services also may be provided or received, however, by other sectors of the economy.

3.80 In cases in which a single exchange value reflects more than one transaction category, the transactions captured in the single exchange need to be partitioned (unbundled) into individual transactions, as described in paragraph 3.17. In that case, the total value of the partitioned individual transactions must equal the market value of the exchange that actually occurred. For example, actual exchange values involving foreign currency may include commission for currency conversion. Any portion related to currency conversion should be recorded separately as transactions in services.

2. Valuation of other flows

3.81 Other flows in the international accounts capture changes in the international investment position of financial assets and liabilities that are not due to transactions. Holding gains and losses arise from changes in market values of positions of financial assets and liabilities. Holding gains and losses may accrue continuously. A holding gain occurs when an asset increases in value or a liability decreases in value; a holding loss occurs when an asset decreases in value or a liability increases in value. The value of holding gains and losses during an accounting period shows net holding gains or losses for assets and liabilities separately. In practice, the value of holding gains and losses are calculated for each asset and liability between two points in time: the beginning of the period (or when the asset or liability is acquired or incurred) and the end of the period (or when the asset or liability is sold or extinguished).

3.82 For loans, deposits, and other accounts receivable/payable sold at a discount, the transaction values recorded in the financial account may differ from the nominal values recorded in the international investment position. Such differences are recorded as valuation changes in the other changes in financial assets and liabilities account (see also paragraph 9.33).

3.83 Other changes in the volume of financial assets and liabilities are recorded at the market-equivalent prices of similar instruments. When writing off financial instruments that are valued at nominal values, the value recorded in the other changes in financial assets and liabilities account should correspond to their nominal value prior to being written off. For all reclassifications of assets and liabilities, values of both the new and old instruments should be the same.

3. Valuation of positions of financial assets and liabilities

Reference:

IMF, *Monetary and Financial Statistics Compilation Guide*, paragraphs 2.42–2.67.

3.84 *Positions of financial assets and liabilities should, in general, be valued as if they were acquired in market transactions on the balance sheet reporting date*. Many financial assets are traded in markets on a regular basis and therefore can be valued by directly using the price quotations from these markets. If the financial markets are closed on the balance sheet date, the market prices that should be used in the valuation are those that prevailed on the closest preceding date when the markets were open. Debt securities have a current market value as well as a nominal value, and for some purposes, supplementary data on the nominal values of positions of debt securities may be useful (see paragraph 3.88 for definition of nominal value).

3.85 Valuation according to the market-value equivalent is needed for valuing financial assets and liabilities that are not traded in financial markets or that are traded only infrequently. For these assets and liabilities, it will be necessary to estimate fair values that, in effect, approximate market prices. The present value of future cash flows also may be used as an approximation to market prices, provided an appropriate discount rate can be used.

3.86 Loan positions are recorded at nominal value. The use of nominal values is partly influenced by pragmatic concerns about data availability and the need to maintain symmetry between debtors and creditors. In addition, because loans are not intended for negotiability, without an active market, estimating a market price can be somewhat subjective. Nominal value is also useful because it shows actual legal liability and the starting point of creditor recovery behavior. In some instances, loans also may be traded, often at discount, or a fair value may exist or would be possible to estimate. It is recognized that nominal value provides an incomplete view of the financial position, particularly when the loans are nonperforming. Therefore, information on the nominal value of nonperforming loans should be included as a memorandum or supplementary item (see paragraph 7.50 for the definition of nonperforming loans). Loans that have become negotiable de facto should be reclassified under debt securities (see paragraph 5.45 for criteria for reclassification).

3.87 Positions on deposits and accounts receivable/payable are also recorded at nominal value. They give rise to the same issues of nominal and fair values as loans. Deposits at banks and other deposit-taking corporations in liquidation also should be recorded at their nominal value until they are written off. If significant, however, such deposits should be shown separately as a supplementary item. The same treatment is applicable for any other cases of impaired deposits (i.e., where the deposit-taking corporation is not in liquidation but is insolvent).

3.88 Market values, fair values, and nominal values should be distinguished from such notions as amortized values, face values, book values, and historic cost.

(a) *Fair value* is a market-equivalent value. It is defined as the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's-length transaction. It thus represents an estimate of what could be obtained if the creditor had sold the financial claim.

(b) *Nominal value* refers to the outstanding amount the debtor owes to the creditor, which is composed of the outstanding principal amount including any accrued interest. So the nominal value reflects the sum of funds originally advanced, plus any subsequent advances, plus any interest that has accrued, less any repayments (which includes any payments covering interest accrual).[4] Nominal value in domestic currency of a debt instrument denominated in foreign currency also includes holding gains or losses arising from exchange rate changes.

(c) *Amortized value* of a loan reflects the process of gradual elimination of the liability by regular payments over a specified period of time. On the date of each scheduled payment, amortized value is the same as nominal value, but it may differ from the nominal value on other dates because nominal value includes interest that has accrued and not been paid.

(d) *Face value* is the undiscounted amount to be paid to the holder at maturity. It is also known as "par value" or simply "par." Before maturity, the market value of a bond may be greater or less than face value, depending on the interest rate payable and the perceived risk of default. As bonds approach maturity, market value approaches face value. For example, if interest rates are higher than the bond's coupon rate, then the bond is sold at a discount (below par). Conversely, if interest rates are lower than the bond's coupon rate, then the bond is sold at a premium (above par).

(e) *Book value* in business accounts generally refers to the value recorded in the enterprise's records. Book values may have different meanings because their values are influenced by the timing of acquisition, company takeovers, frequency of revaluations, and tax and other regulations.

(f) *Historic cost*, in its strict sense, reflects the cost at the time of acquisition, but sometimes it also may reflect occasional revaluations.

3.89 The valuation of financial assets and liabilities in data reported by enterprises or other respondents may be based on commercial, supervisory, tax, or other

[4]For debt instruments indexed to a "narrow" index, the nominal value can also include holding gains and losses arising from movements in the index (see paragraph 11.61(b)). For further detail on nominal value, see *External Debt Statistics: Guide for Compilers and Users.*

accounting standards that do not fully reflect the market prices of the assets and liabilities. In such cases, the data should be adjusted to reflect, as closely as possible, the market value of the financial assets and liabilities except when they are to be recorded at nominal values (see paragraphs 3.86–3.87).

3.90 When securities are quoted on markets with a buy-sell spread, the midpoint should be used to value the instrument. The spread is an implicit service of the dealer, paid by buyers and sellers (see paragraphs 10.122–10.123). Similarly, positions in financial assets and liabilities denominated in foreign currency should be valued using the midpoint at close of business between the buying and selling rates on the reference date.

3.91 Specific cases of valuation of positions of financial assets and liabilities, particularly when market prices are not available or pose problems, are discussed in Chapter 7, International Investment Position.

4. Unit of account and currency conversion

a. Unit of account

3.92 Values of nonfinancial and financial transactions as well as the values of positions of financial assets and liabilities may be expressed initially in a variety of currencies or in other standards of value, such as Special Drawing Rights (SDRs). The conversion of these values into a reference unit of account is a requisite for the construction of consistent and analytically meaningful accounts.

3.93 International accounts can be compiled in the domestic currency as well as in another currency. Data in domestic currency are needed because several other macroeconomic and micro data are compiled in domestic currency, except when a foreign currency is used as a legal tender. Economic analysis often uses data from several macroeconomic statistical systems. Conversely, data in an international unit of account (a foreign currency) may be needed for international liquidity management and to address special issues for high inflation, significant exchange rate fluctuations, and multiple exchange rates. In addition, a standard or international unit of account is necessary to allow for aggregation on a global or regional basis and to facilitate international comparisons.

3.94 From the international perspective, a standard unit of account is required for global presentation and analysis. It is preferable that the unit of account be a stable one; that is, values of international transactions expressed in that unit should not be significantly affected by changes (relative to the unit of account) in values of currencies in which those transactions occur. Transactions expressed in a unit that is stable in this sense nonetheless may reflect price changes resulting from other causes; that is, a series expressed in a so-called stable unit of account is not the equivalent of a volume measure or constant price series. The theoretical ideal of a widely recognized and perfectly stable standard unit of account simply does not exist in practice.

b. Domestic versus foreign currency

3.95 For an economy, a domestic currency is distinguished from foreign currency. *Domestic currency is that which is legal tender in the economy and issued by the monetary authority for that economy; that is, either that of an individual economy or, in a currency union, that of the common currency area to which the economy belongs.* All other currencies are foreign currencies.

3.96 Under this definition, an economy that uses as its legal tender a currency issued by a monetary authority of another economy—such as U.S. dollars—or of a common currency area to which it does not belong should classify the currency as a foreign currency, even if domestic transactions are settled in this currency. The term "currency" should be understood in the broad sense (i.e., currency includes not only banknotes and coins but all means of payments issued by financial institutions in an economic territory). Unallocated gold accounts and other unallocated accounts in precious metals giving title to claim the delivery of gold or precious metal are treated as denominated in foreign currency. The treatment of unallocated accounts in other commodities will need to be decided at the time such cases arise in the future.

3.97 SDRs are considered to be foreign currency in all cases, including for the economies that issue the currencies in the SDR basket. Any other currency units issued by an international organization, except in the context of a currency union (see paragraph 3.95), are considered foreign currency.

c. Currency of denomination and currency of settlement

3.98 A distinction should be made between the currency of denomination and the currency of settlement. The currency of denomination is determined by the currency in which the value of flows and positions is fixed as specified in the contract between the parties. Accordingly, all cash flows are determined using the currency of denomination and, if necessary, converted into the

domestic currency or another unit of account for the purpose of settlement or compilation of accounts. The currency of denomination is important for distinguishing transaction values and holding gains and losses.

3.99 The currency of settlement may be different from the currency of denomination. Using a currency in settlement that is different from the currency of denomination simply means that a currency conversion is involved each time a settlement occurs. The currency of settlement is important for international liquidity and measurement of potential foreign exchange drains. The currency of settlement is also important for defining reserve assets (see paragraph 6.64).

3.100 The currency of denomination of equity and investment fund shares is generally the domestic currency of the economy in which the issuer is resident. However, when equity is issued in a currency other than the domestic currency, then that currency is the currency of denomination.

3.101 Debt instruments with both the amount to be paid at maturity and all periodic payments (such as coupons) indexed to a foreign currency are classified and treated in the international accounts as being denominated in that foreign currency.

3.102 Some financial assets and liabilities are denominated in more than one currency. However, if the amounts payable are linked to one specific currency, then the liability should be attributed to that currency. Otherwise, compilers are encouraged to disaggregate such multicurrency instruments by the component currencies.

3.103 Determining the currency of denomination is not always clear in financial derivative contracts to purchase or sell foreign currency using domestic currency. The decisive factor in determining the currency of denomination for these contracts is the exposure to currency movements. If settlement of a financial derivative contract is linked to a foreign currency, even though payment is required in domestic currency, then the financial derivative is to be classified as denominated in foreign currency.

d. Currency conversion principles

3.104 Flows denominated in a foreign currency are converted to their value in the domestic currency at the rate prevailing when the flows take place, and positions are converted at the rate prevailing on the balance sheet date. The midpoint between the buying and selling rates should be used at the time of transaction (for transactions) and at the close of business on the reference date for positions.[5] The valuation in the domestic currency of a purchase or sale on credit denominated in a foreign currency may differ from the value in domestic currency of the subsequent cash payment because the exchange rate changed in the interim. Both transactions should be valued at their current market values as of the dates they actually occurred, and a holding gain or loss resulting from the change in the exchange rate should be recorded for the period or periods in which the gain or loss occurs.

3.105 In principle, the actual exchange rate applicable to each transaction should be used for currency conversion. The use of a daily average exchange rate for daily transactions usually provides a good approximation. If daily rates cannot be applied, average rates for the shortest period should be used. Some transactions occur on a continuous basis, such as the accrual of interest over a period of time. For such flows, therefore, an average exchange rate for the period in which the flows occur should be used for currency conversion.

3.106 Derived measures (see Section H for the definition of derived measures) relating to a period are calculated by subtracting one type of flow from another. In principle, therefore, derived measures of flows in one currency (e.g., domestic currency) should not be directly converted into another currency (e.g., foreign currency). First, the underlying flows themselves should be converted from the domestic currency into the foreign currency. Then, the derived measures in foreign currency can be calculated from the relevant flows denominated in foreign currency. It is possible that a derived measure, such as the current account balance, denominated in one currency may be different or even with the opposite sign from that denominated in another currency. In addition to the variations in exchange rates, the variations in the timing of underlying flows cause the differences in a derived measure denominated in different currencies.

3.107 Under a multiple exchange rate regime, two or more exchange rates are applicable to different categories of transactions; the rates favor some categories and discourage others. Such rates incorporate elements similar to taxes or subsidies. Because the multiple rates influence the values and the undertaking of transactions expressed in domestic currency, net proceeds implicitly accruing to authorities as a result of these transactions are calculated as implicit taxes or subsi-

[5]The difference between buying or selling prices and midpoint prices represents a service charge (see paragraphs 10.122–10.123).

dies. The amount of the implicit tax or subsidy for each transaction can be calculated as the difference between the value of the transaction in domestic currency at the *actual exchange rate applicable* and the value of the transaction at a *unitary rate* that is calculated as a weighted average of all official rates used for external transactions. For conversion of positions of external financial assets and liabilities in a multiple rate system, the actual exchange rate applicable to specific assets or liabilities at the beginning or end of the accounting period is used.

3.108 Parallel (unofficial) or black market rates cannot be ignored in the context of a multiple rate regime and can be treated in different ways. For instance, if there is one official rate and a parallel market rate, the two should be handled separately. Transactions in parallel markets should be converted using the exchange rate applicable in that market. If there are multiple official rates and a parallel rate, the official rates and the parallel rate should be treated as distinct markets in any calculation of a unitary rate. Transactions effected at the parallel rate usually should be converted separately at that rate. In some instances, however, parallel markets may be considered effectively integrated with the official exchange rate regime. Such is the case when most or all transactions in the parallel market are sanctioned by the authorities or when the authorities actively intervene in the market to affect the parallel rate. In this instance, the calculation of the unitary rate should include both the official and parallel market rates. If only limited transactions in the parallel market are sanctioned by the authorities, the parallel rate should not be included in the calculation of a unitary rate.

F. Aggregation and Netting

3.109 Transactions, other flows, and positions of external financial assets and liabilities are presented in the international accounts by grouping them into several analytically meaningful categories. The classification of transactions, other flows, and positions of financial assets and liabilities is aimed at developing aggregates that group similar items and separate those items that have different characteristics. Aggregates and classifications are closely linked in that classifications are designed to produce the aggregates thought to be most useful.

3.110 *Aggregates are summations of elementary items in a class of transactions, other flows, or positions.* For example, compensation of employees is the sum of all flows that are classified as compensation of employees. For financial assets and liabilities, the aggregation of position or flow data is usually done across all institutional units within a subsector or sector. Aggregation is hierarchical in the sense that upper-level aggregates are derived directly by summing the lower-level aggregates.

3.111 Individual units may have the same kind of transaction both as a credit and a debit—for example, they may pay as well as receive interest or may acquire foreign currency as well as sell the foreign currency. Similarly, individual units may have the same kind of financial instrument both as an asset and as a liability—for example, they may have a claim in the form of debt securities as well as a liability in the form of debt securities.

3.112 *Aggregations or combinations in which all elementary items are shown for their full values are called gross recordings* (e.g., all interest credits are aggregated separately from all interest debits). *Aggregations or combinations for which the values of some elementary items are offset against the same items that have an opposite sign are called net recordings* (e.g., acquisitions of foreign currency are netted against the sales of the foreign currency).

3.113 The international accounts follow gross recording in the current and capital accounts. For goods under merchanting, both purchases and resales of goods are shown on a gross basis, although both entries are shown under exports with a negative sign for purchases (this is elaborated further in paragraph 10.44). Gross recording is applicable in particular to income on reverse investment where the direct investment enterprise owns less than 10 percent of the voting power in the direct investor (reverse investment is described in paragraphs 6.39–6.40). Acquisitions and disposals of nonproduced, nonfinancial assets are recorded on a gross basis. Capital transfers receivables and payables are also recorded separately on a gross basis. Flows on transactions in nonproduced, nonfinancial assets and capital transfers are recorded on a gross basis, because they are important in the context of cross-border analysis. At the same time, the gross recording allows the derivation of net flows, if needed, provided that a sufficient level of detail is available.

3.114 In the case of flows in financial assets and liabilities, the term "net" may have dual meanings (summing all debits and credits for a financial asset type or a liability type and netting of an asset against a liability). To avoid confusion, this *Manual* adopts the following conventions:

(a) In the case of flows, "net recording" always refers to aggregations for which all debit entries of a particular asset or a particular liability are netted against all credit entries in the same asset type or in the same liability type (e.g., acquisitions of foreign currency are netted against the sales of the foreign currency; bond issues are netted against redemption of bonds).

(b) When net is used together with a category of financial instrument (net *financial instrument*), such as "net financial derivatives," netting of a financial asset against the same type of liability is understood.

(c) Title of some derived measures also uses the term "net." They are "net lending/borrowing" and "net international investment position."

3.115 The international accounts follow net recording in the financial account and other changes in financial assets and liabilities account. Net recording, as explained above, means aggregations or combinations that show net changes (increases less reductions) in a particular financial asset or a liability category on the same side of the balance sheet. Financial assets (changes in financial assets) should not be netted against liabilities (changes in liabilities), except in certain circumstances as explained in paragraph 3.118.

3.116 Transactions and other flows in financial assets and liabilities are recorded as net changes in financial assets and net changes in liabilities, respectively. The net recording principle should be applied at the lowest level of classification of financial instruments taking into account the functional, institutional sector, maturity, and currency classifications, as applicable. Generally, the net recording principle should be applied within a given standard component of assets or liabilities.

3.117 In general, net recording of flows in financial assets and liabilities are recommended in the international accounts from both the analytical and pragmatic perspectives. Net acquisition of external financial claims and net incurrence of external liabilities are generally of more analytical interest than the gross flows. Gross reporting of data may not be possible for different classes of units and for some financial instruments. Furthermore, transactions in some financial assets and liabilities often have to be derived from balance sheet data because gross transactions are not available. Nonetheless, gross flows may be a relevant factor in analyzing aspects of the payments positions or financial markets (e.g., securities transactions) of economies, and such data can be used in supplementary presentations when appropriate. For example, for direct investment, equity increases and equity decreases may be of analytical interest and may be shown separately in supplementary presentations.

3.118 In some cases, a clear distinction between assets and liabilities may not be feasible (such as for financial derivatives in the form of forward contracts, which could change between assets and liabilities). In such cases, it may not be possible to apply the net recording principle, which requires separate presentation of transactions in assets and transactions in liabilities. For such financial instruments, net transactions in assets and liabilities combined may have to be recorded in the international accounts.

3.119 Positions of financial assets and liabilities are recorded on a gross basis. Positions of the same type of a financial instrument held as both a financial asset and a liability are to be presented gross, so that assets are recorded under assets and liabilities are recorded under liabilities. For example, holding of short-term debt securities as assets is presented separately from the liability for short-term debt securities. For financial derivatives, see also paragraph 6.60.

3.120 Consolidation is a method of presenting statistics for a set of units as if they constituted a single unit. Because the international accounts reflect transactions involving residents and nonresidents and external financial assets and liabilities, including other flows associated with them, consolidation is not relevant for international accounts of an individual economy.

3.121 International accounts for a currency union, economic union, or other regional arrangement may be compiled by eliminating all transactions and asset-liability relationships that occur between member economies of the region. In other words, in the international accounts, a transaction of one economy is paired with the same transaction as recorded for another member economy and both transactions are eliminated. For example, if a unit in one economy owns a bond issued by a unit in another member economy, then the stocks of bonds held as assets and liabilities are reported excluding the matched positions between the units of the member economies. At the same time, interest receivable and payable consolidated at the regional or currency union level exclude the interest payable by residents of the debtor economy to residents of the creditor economy in the region or currency union. Similarly, sales of goods and services between consolidated economies are also eliminated. (For further information, see Appendix 3,

Regional Arrangements: Currency Unions, Economic Unions, and Other Regional Statements.)

G. Symmetry of Reporting

3.122 Symmetry of reporting by counterparties is important to ensure consistency, comparability, and analytical usefulness of international accounts. The quadruple-entry accounting system discussed in paragraph 3.29 underlies symmetry of reporting. The internationally agreed guidelines for definitions, classifications, time of recording and valuation principles, and the quadruple-entry accounting system provide a basis for conceptual consistency of reporting by both parties or economies involved in a transaction or financial position. Correct application of these guidelines and principles is important for bilateral comparisons, global balances, and regional and global aggregates. While symmetry rules apply to all financial instruments, they do not fully apply to functional categories of financial positions and transactions. For example, transactions and positions in reserve assets are reflected in the liabilities of counterparts in the rest of the world under other functional categories, particularly portfolio and other investment.

3.123 International accounts group the flow and position data of individual units into sectoral and national aggregates. International accounts also can be prepared for a region and the world as a whole. Without applying strict consistency rules, it would be impossible to give proper interpretation to various aggregates. These requirements apply whether or not the data consolidate flows and positions of the units they cover, and whether or not they show any subgroups of units within the overall total. However, consolidation is clearly impossible without consistency in the basic data, and the requirements of consistency are more obvious when disaggregation of sectors is used.

3.124 Micro-level data on the basis of which the international accounts are compiled do not necessarily meet the consistency requirements needed for international accounts. Differences in valuation, timing, and classification may occur in many cases. Inconsistency in valuation may often occur for barter transactions. Different valuation bases may have been used by creditors and debtors for some financial assets, such as nonperforming loans. Timing differences may occur not only due to differences in timing zones and delays in check-clearing systems, but also because units' perceptions of the timing of changes in ownership and recognition of revenues and expenses may vary.

3.125 Significant achievements have been made at the national and international levels to come to more uniform business accounting standards. Accordingly, disparities between individual micro accounts have tended to fall. Business accounting standards are geared toward individual accounts, however, and therefore do not necessarily ensure interunit consistency. Current business accounting standards prescribe that loans be treated differently depending on whether they appear as a credit or a debit. This approach cannot be applied in a consistent horizontal double-entry bookkeeping system. Tax and supervisory regulations are a second source for harmonization of accounting practices. In so far as these rules differentiate between specific sections of the economy, however, they also may be a cause for discrepancies between micro accounts.

H. Derived Measures

3.126 Derived measures are not transactions or other flows. They are economic constructs that are calculated by subtracting one or more aggregates from one or more other aggregates. They are important analytical tools that summarize the values of selected flows or stocks that have been individually recorded in the international accounts.

3.127 A derived measure cannot be obtained independently of the other entries; as a derived entry, it reflects the application of the general accounting rules to the specific entries from which it is derived. Some derived measures are essentially balancing items, because they are obtained by subtracting the total value of the entries on one side of an account from the total value for the other side (e.g., net international investment position is equal to total external financial assets minus total external liabilities).

3.128 Derived measures encapsulate a great deal of information and include some of the most important entries in the international accounts. However, they are best understood and more analytically useful if considered together with the aggregates from which they are derived.

3.129 Some important measures derived as balances in the international accounts are as follows:

- Balance on trade in goods;
- Balance on trade in services;
- Balance on goods and services;
- Balance on goods, services, and primary income;
  - current account balance;

- Net lending/net borrowing:
  - from current and capital accounts;
  - from financial account;
- Changes in net IIP arising from other flows (in total, and for each of other changes in volume, exchange rate changes, and other price changes); and
- Net international investment position.

This list is not comprehensive; other balances can be derived as needed for analysis. For example, balances on components in the financial account may be of interest, such as net direct investment or net portfolio investments.