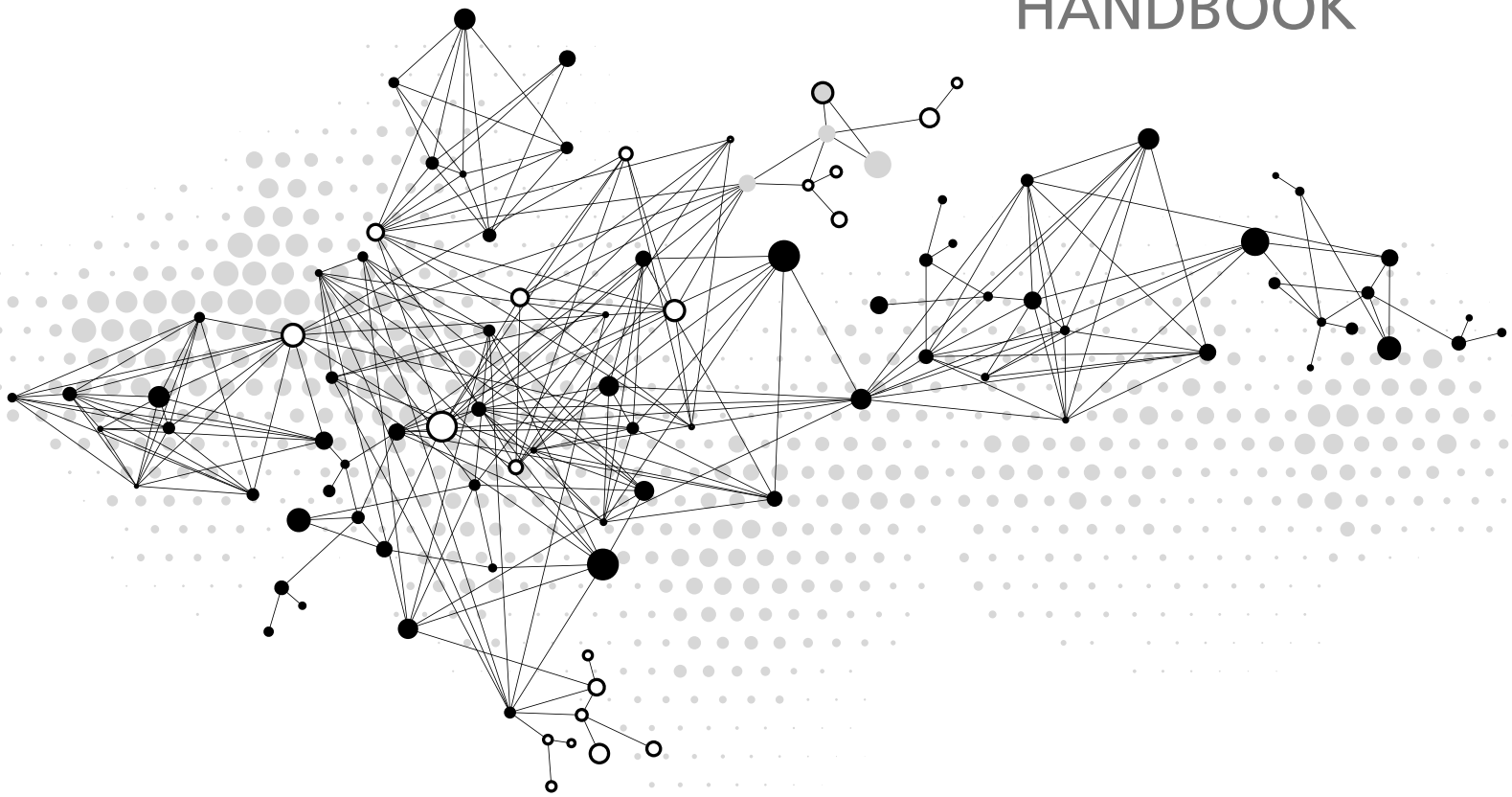


HANDBOOK



HANDBOOK ON SECURITIES STATISTICS



BANK FOR
INTERNATIONAL
SETTLEMENTS



EUROPEAN CENTRAL BANK
EUROSYSTEM



INTERNATIONAL MONETARY FUND

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Foreword

The importance of securities markets in intermediating financial flows, both domestically and internationally, underscores the need for relevant, coherent, and internationally comparable statistics. This need was recognized by the G-20 Data Gaps Initiative, launched in the aftermath of the 2008 global financial crisis with the support of the G-20 Finance Ministers and Central Bank Governors and the International Monetary Fund's International Monetary and Financial Committee.

Good securities data, along with monetary and financial statistics, are critical to understand the evolution and structure of financial intermediation. The *Handbook on Securities Statistics* supports this analysis by enabling the collection of better securities data through clarification of concepts and guidance on harmonized presentation of securities data. The *Handbook* describes the main features of debt and equity securities, looks at institutional units and sectors as issuers and holders of securities, and discusses the statistical recording rules to be applied.

As a milestone, the *Handbook* is the first publication of its kind dealing exclusively with the conceptual framework for the compilation and presentation of securities statistics. Prepared jointly by the Bank for International Settlements, the European Central Bank and the International Monetary Fund in close cooperation, the *Handbook* has also benefited from comments by experts from national central banks, national agencies, and international organizations.

We expect that the *Handbook* will be widely applied, fostering harmonization of international securities statistics that support the analysis of global economic, financial, and macroprudential issues.

Jaime Caruana
General Manager
Bank for International Settlements

Mario Draghi
President
European Central Bank

Christine Lagarde
Managing Director
International Monetary Fund



Preface

The production of the *Handbook on Securities Statistics* (the *Handbook*) is a joint undertaking by the Bank for International Settlements (BIS), the European Central Bank (ECB) and the International Monetary Fund (IMF). They have specific interests and expertise in the area of securities statistics and are the core members of the Working Group on Securities Databases (WGSD).

In 2007, the WGSD—originally established by the IMF in 1999—was reconvened in response to various international initiatives and recommendations to improve information on securities markets. The WGSD is chaired by the ECB and includes the BIS, the IMF and the World Bank. Selected experts from national central banks, who participated actively in the various international groups that identified the need to improve data on securities markets, were also invited to contribute to some of the WGSD’s deliberations. In mid-2008, the WGSD agreed to sponsor the development of a handbook on securities statistics.

In November 2009, the report entitled “The Financial Crisis and Information Gaps,” which was prepared by the Financial Stability Board (FSB) Secretariat and IMF staff at the request of the Group of Twenty (G-20) finance ministers and central bank governors, endorsed the development of the *Handbook*, as well as the gradual implementation of improved statistics on issuance and holdings of securities at the national and international level. The BIS’s compilation of data on debt securities plays an important role in this respect.¹

The *Handbook* sponsors responded to the demand from various international groups for the development of methodological standards for securities statistics and released the *Handbook* in three parts. Part 1 on debt securities issues was published in May 2009, and Part 2 on debt securities holdings in September 2010. Part 3 of the *Handbook* on equity securities statistics was published in November 2012. The methodology described in all three parts was based on the *System of National Accounts 2008 (2008 SNA)* and the sixth edition of the *Balance of Payments and International Investment Position Manual (BPM6)*. The three parts also went slightly beyond the confines of these standards by providing guidance and additional information on, for example, the main features of securities, special and borderline cases, and breakdowns of issues and holdings of securities by counterparty. Special attention was also paid to specific operations such as mergers and acquisitions, restructuring, privatization and nationalization, and transactions between general government and public corporations.

From the beginning, the intention was to combine the three parts into one volume, thereby eliminating any overlap and repetitions between the parts. The *Handbook*’s conceptual framework is complemented by a set of tables for presenting securities data both at an aggregated level and broken down by various features. This should allow sufficient flexibility in the presentation of data on issuance and holdings of securities, in line with developments in securities markets and financing.

The *Handbook* is the first publication of its kind to focus exclusively on securities statistics. Recent turmoil in global financial markets has confirmed the importance of timely, relevant, coherent, and internationally comparable data on securities, from the perspective of monetary policy, fiscal policy, and financial stability analysis. This *Handbook* provides a conceptual framework for the compilation and presentation of statistics on different types

¹For more information, see www.bis.org/statistics/secstats.htm.

of securities, including those derived from the securitization of assets. As already mentioned, it is consistent with the recently reviewed international statistical standards.

The following officials in the sponsoring organizations and institutions were the most heavily involved in the WGSD's activities and have played a key role in preparing the *Handbook*:

- BIS Mr Christian Dembiermont
 Mr Branimir Gruić
 Mr Philippe Mesny
 Mr Paul Van den Bergh
 Mr Kerry Wood
- ECB Mr Werner Bier (Chair of the WGSD)
 Mr Remigio Echeverría
 Mr Reimund Mink (Coordinator)
- IMF Mr José M. Cartas
 Mr Alfredo Leone
 Mr J. Roberto Rosales
 Ms Armida San Jose

The sponsors are grateful for the contributions of various experts from the following central banks, national statistical agencies and international organizations (national agencies are listed alphabetically by country):

- | | |
|----------------------------------|--|
| Bank of Algeria | Bank of Greece |
| Central Bank of Argentina | Hong Kong SAR Census and Statistics Department |
| Central Bank of Armenia | Hong Kong Monetary Authority |
| Reserve Bank of Australia | Magyar Nemzeti Bank |
| Austrian National Bank | Central Bank of Iceland |
| National Bank of Belgium | Reserve Bank of India |
| Central Bank of Brazil | Bank Indonesia |
| Bulgarian National Bank | Central Bank of Ireland |
| Bank of Canada | Bank of Israel |
| Statistics Canada | Bank of Italy |
| Central Bank of Chile | Bank of Japan |
| The People's Bank of China | Bank of Korea |
| Bank of the Republic of Colombia | Bank of Latvia |
| Croatian National Bank | Central Bank of Lebanon |
| Czech National Bank | Bank of Lithuania |
| National Bank of Denmark | National Bank of the Republic of Macedonia |
| Bank of Finland | Central Bank of Malaysia |
| Bank of France | Bank of Mexico |
| Deutsche Bundesbank | Netherlands Bank |
| Bank of Ghana | Reserve Bank of New Zealand |

Central Bank of Norway	Bank of Slovenia
Statistics Norway	South African Reserve Bank
State Bank of Pakistan	Bank of Spain
Central Reserve Bank of Peru	Sveriges Riksbank
Bangko Sentral ng Pilipinas	Swiss National Bank
Philippines Bureau of the Treasury	Bank of Thailand
Philippines Securities and Exchange Commission	Central Bank of the Republic of Turkey
National Bank of Poland	Bank of England
Bank of Portugal	Board of Governors of the Federal Reserve System
National Bank of Romania	Central Bank of Venezuela
Central Bank of the Russian Federation	Asian Development Bank
Saudi Arabian Monetary Authority	Commonwealth Secretariat
Central Bank of Luxembourg	Islamic Financial Service Board
Monetary Authority of Singapore	United Nations Conference on Trade and Development
National Bank of Slovakia	

The feedback provided by experts from these central banks, agencies, and organizations has made a significant contribution to the preparation of the *Handbook*. The WGSD envisages continuing to solicit input from users and compilers of securities statistics when providing guidance on security-by-security (SBS) databases and metadata structure definitions that facilitate the compilation and dissemination of securities statistics.

The WGSD encourages national and international agencies to use the *Handbook* to improve statistics on securities, for example, in the context of the IMF's Coordinated Portfolio Investment Survey (CPIS) and Coordinated Direct Investment Survey (CDIS). The recent financial and economic crisis in global financial markets, which also had an impact on issuers and holders of securities, underlined the importance of timely, relevant, coherent, and internationally comparable securities data. The institutions involved will continue to support the WGSD in its efforts to improve the transparency of global securities markets, also through the further development and implementation of the *Handbook*.

Claudio Borio
Head of the Monetary and Economic Department
Bank for International Settlements

Aurel Schubert
Director General Statistics
European Central Bank

Louis Marc Ducharme
Director, Statistics Department
International Monetary Fund



Abbreviations

<i>2008 SNA</i>	<i>System of National Accounts 2008</i>
ABCP	Asset-backed commercial paper
ABS	Asset-backed security
ADR	American depository receipt
AF	Codes for stocks of financial assets and liabilities in the <i>2008 SNA</i>
BCEAO	Central Bank of West African States
BIS	Bank for International Settlements
BEAC	Bank of Central African States
BOOT	Build-own-operate-transfer
BOT	Build-operate-transfer
<i>BPM6</i>	<i>Balance of Payments and International Investment Position Manual, Sixth Edition</i>
CBO	Collateralized bond obligation
CCD	Development capital certificate (also “certificados de capital de desarrollo”)
CDIS	Coordinated Direct Investment Survey
CDO	Collateralized debt obligation
CDS	Credit default swap
CEM	Control enhancing mechanism
CFI	Classification of financial instruments
CG	Central government
CLN	Credit-linked note
CLO	Collateralized loan obligation
CMO	Collateralized mortgage obligation
CPI	Consumer price index
CPIS	Coordinated Portfolio Investment Survey
CSDB	Centralized Securities Database
CUCB	Currency union central bank
D	Codes for distributive transactions in the <i>2008 SNA</i>
DIENT	Direct investment enterprise
DQAF	Data Quality Assessment Framework

DRIP	Dividend reinvestment plan/program
ECB	European Central Bank
ECCB	Eastern Caribbean Central Bank
EDR	European depository receipt
EGR	Euro Groups Register
ELI	Equity-linked instrument
ELN	Equity-linked note
ESCB	European System of Central Banks
ETF	Exchange-traded fund
EU	European Union
F	Code for financial transactions in the 2008 SNA
FC	Financial corporation
FDI	Foreign direct investment
FSB	Financial Stability Board
G20	Group of Twenty
GAAP	Generally Accepted Accounting Principles
GDR	Global depository receipt
<i>GFSM 2014</i>	<i>Government Finance Statistics Manual 2014</i>
GG	General government
HH	Household
ICIS	Islamic collective investment scheme
IDR	International depository receipt
IIP	International investment position
IFRS	International financial reporting standards
IFSB	Islamic Financial Services Board
IMF	International Monetary Fund
IPO	Initial public offering
ISIN	International Securities Identification Number
LIBOR	London interbank offered rate
<i>MFSM</i>	<i>Monetary and Financial Statistics Manual</i>
<i>MFSCG</i>	<i>Monetary and Financial Statistics Compilation Guide</i>
MMF	Money market fund
MNE	Multinational enterprise
MTN	Medium-term note
NAV	Net asset value
NFC	Nonfinancial corporation

NIF	Note issuance facility
NPISHs	Nonprofit institutions serving households
OECD	Organisation for Economic Co-operation and Development
OFBV	Own funds at book value
OFC	Other financial corporation
OTC	Over the counter
P/E	Price-to-earnings
P/B	Price-to-book value
PIBS	Permanent interest-bearing shares
PFI	Private finance initiative
PPP	Public-private partnership
RUF	Revolving underwriting facility
RMBS	Residential mortgage-backed security
S	Code for institutional sectors or subsectors in the <i>2008 SNA</i>
SBS	Security-by-security
SDR	Special drawing right
SEC	U.S. Securities and Exchange Commission
SEFER	Survey of Securities Held as Foreign Exchange Reserves
SPAC	Special-purpose acquisition company
SPE	Special purpose entity
SSIO	Survey of Securities Held by International Organizations
STRIPS	Separate trading of registered interest and principal of securities
STA	IMF's Statistics Department
UCITS	Undertakings for collective investment in transferable securities
U.S.	United States
VRN	Variable rate note
WGSD	Working Group on Securities Databases



1

Introduction

Objective of the *Handbook*

1.1 The *Handbook on Securities Statistics* (the *Handbook*) is the first publication of its kind to deal exclusively with the presentation of securities statistics. The objective of the *Handbook* is to improve information on securities markets. It develops a conceptual framework for presenting statistics on different types of securities. The methodology is based on the *System of National Accounts 2008 (2008 SNA)* and the sixth edition of the *Balance of Payments and International Investment Position Manual (BPM6)*.

1.2 The intention is to develop a framework facilitating the production of timely, relevant, coherent, and internationally comparable securities statistics for use in monetary and fiscal policy formulation and financial stability analysis. The *Handbook* will assist policymakers and analysts in these areas, as well as national agencies preparing securities statistics within their existing presentation frameworks.

Scope of the *Handbook*

1.3 The *Handbook* covers the conceptual framework for position and flow statistics on securities. This conceptual framework is summarized below, using stylized presentation tables with aggregate statistics on securities issues and holdings.

1.4 The *Handbook* covers broad conceptual issues related to the presentation of statistics on debt and equity securities, thus ensuring it will remain relevant to future financial innovation. It enables the comparability of statistics across economies—statistics that can then be used to develop meaningful global aggregates.

1.5 The *Handbook* provides additional information on borderline cases, complementing that available in the international statistical standards and clarifying where debt securities are distinguished from equity

securities and other financial instruments. The *Handbook* also provides a framework for classifying securities statistics based on the international statistical standards, extends the groupings used in these standards, and outlines new classifications.

Securities as Negotiable Financial Instruments

1.6 Securities are negotiable financial instruments (2008 SNA, paragraph 11.33 and BPM6, paragraph 5.15). Negotiability refers to the fact that legal ownership of the instrument is readily capable of being transferred from one owner to another by delivery or endorsement. While any financial instrument can potentially be traded, a security is designed to be traded on an organized exchange or “over the counter” (OTC), although evidence of actual trading is not required. The OTC market involves parties negotiating directly with one another, rather than on a public exchange.

1.7 Securities include debt securities, equity securities and, to some extent, investment fund shares or units.

Debt Securities, Equity Securities, and Investment Fund Shares or Units

1.8 *Debt securities* are negotiable financial instruments serving as evidence of a debt (2008 SNA, paragraph 11.64). They are covered by the financial assets and liabilities (financial instrument) category “debt securities” (F3) in the 2008 SNA.¹

1.9 *Equity securities* are negotiable financial instruments that entitle holders to a share of both distributed profits and the residual value of the corpo-

¹Annex 1 of the 2008 SNA describes its classification hierarchies and lists the associated codes. F codes refer to financial transactions, while AF codes relate to stocks of financial assets and liabilities. F codes are used throughout the *Handbook*.

Table 1.1 Equity and Equity Securities

Equity (F51)		
Listed shares (F511)	Unlisted shares (F512)	Other equity (F519)
Equity securities		

Source: 2008 SNA, paragraph A1.26.

ration's assets in the event of its liquidation. Holders of these financial assets are the collective owners of a corporation.² Equity securities are part of the financial assets and liabilities (financial instrument) category “equity and investment fund shares or units” (F5) and belong to the subcategory “equity” (F51). Equity securities comprise listed shares (F511) and unlisted shares (F512) (see Table 1.1).

1.10 Investment funds are collective investment schemes that raise funds from the public by issuing investment fund shares or units (F52), in order to acquire financial or nonfinancial assets. Open-ended investment fund shares or units are not usually negotiable—the investors purchase (or redeem) shares in the fund directly from the fund itself rather than from other shareholders. They are not therefore classified as equity securities. Closed-ended investment fund shares or units are typically negotiable and are therefore covered in the *Handbook*.

1.11 By extending or modifying the groupings used in international statistical standards, and suggesting new classifications, the *Handbook* enriches the information available on securities. This is done, for example, by distinguishing issues and holdings of securities by money-issuing corporations, institutional investors, and securitization corporations, and by providing a breakdown of debt securities issues and holdings by type of interest rate.

1.12 The quality and comparability of securities statistics across economies are also important in the context of developing financial accounts and balance sheets, particularly since the latter are used to provide national and global aggregates. Securities statistics may also help to clarify the nature and degree of nonresident holders' exposure to securities issued by

residents, or resident holders' exposure to securities issued by nonresidents, and any potential linkages.

Use of Statistics on Securities for Policy Analysis

1.13 Because securities carry obligations to make future payments, they have the potential to render an economy, or sectors of an economy, vulnerable to solvency and liquidity problems, as seen during the recent periods of global financial turmoil. These problems can have adverse effects on the real economy, with implications for financial stability and monetary and fiscal policy. It follows that securities markets clearly need to be monitored and measured.

Statistics on Debt Securities

1.14 Statistics on debt securities are required for monetary and fiscal policy, and also for financial stability analysis. The *Handbook* considers them from both the issuer's side (issuance statistics) and the holder's side (statistics on holdings). A “from-whom-to-whom” approach is presented, reflecting the links between issuance and holdings.

1.15 From a monetary policy perspective, much interest lies in changes in the wealth conditions and asset prices related to debt securities held by resident sectors, such as households, and by nonresidents. Furthermore, information on debt securities issues and holdings of financial corporations may help to enhance the analysis of “external” corporate finance by counterpart sector. Data—broken down by residence and sector—on the holders of debt securities issued by general government are required for fiscal policy analysis.

1.16 For financial stability purposes, however, a more detailed breakdown is required, with holdings of debt securities classified by individual issuer, as well as by currency, maturity, type of interest rate, or type of debt security, such as asset-backed securities (ABS). Issuer-by-issuer data may also be required for systemically relevant investors, such as large and complex financial groups. In addition, a breakdown of investors may be useful, in particular of debt securities holdings by financial corporation subsector (money-issuing corporations, insurance corporations, pension funds, and non-MMF investment funds).

1.17 Security-by-security (SBS) databases can, in conjunction with debt securities holdings statistics,

²Participation in quasi-corporations is “other equity” (F519) and is not included in equity securities (2008 SNA, paragraph 11.88).

significantly improve the quality of monetary, financial, government finance, balance of payments and international investment position statistics, financial accounts, and financial balance sheets. Such data are also useful to estimate accrued interest and revaluations due to changes in interest rates and exchange rates.

Statistics on Equity Securities

1.18 The *Handbook* also considers statistics on equity securities from both the issuer's side (issuance statistics) and the holder's side (statistics on holdings). A "from-whom-to-whom" approach is also presented, reflecting the links between issuance and holdings.

1.19 Issues and holdings of equity securities are presented in an unconsolidated form. This is recommended for monetary policy analysis and indeed is the approach adopted by the *2008 SNA*. This means that all gross positions, transactions, revaluations and other changes in the volume of assets and liabilities in equity securities of institutional units are summed. The transactions and positions of institutional units belonging to a particular sector or subsector are shown vis-à-vis all institutional units in all sectors of an economy and in other economies, including those in the same sector or subsector.³

1.20 For monetary policy purposes, information on equity securities held by resident sectors (such as corporations, households, and general government) and by nonresidents enhances the analysis of investment in financial assets. Information on equity securities issued by residents and held by nonresidents, or holdings by residents of securities issued by nonresidents, enhances the analysis of cross-border corporate finance.

1.21 For financial stability purposes, however, a more detailed breakdown is required, with issues and holdings of equity securities broken down by individual issuer (or consolidated for each corporate group) and by type of equity security (e.g., listed and unlisted shares). In addition, a breakdown by type of investor may be useful, particularly for equity securities held by subsectors of the financial corporations

³ The "corporate group approach" is described in Annex 7. It is applied in the context of financial stability analysis and consolidates institutional units in a corporate group on the basis of ownership or control, rather than on the basis of the principal functions, behavior, or objectives of those units.

sector (i.e., money-issuing corporations, insurance corporations, pension funds, and non-MMF investment funds), but also for nonfinancial sectors such as households and nonfinancial corporations.

Coordinated Portfolio Investment Survey and Coordinated Direct Investment Survey

1.22 The *Handbook* also refers to the IMF's Coordinated Portfolio Investment Survey (CPIS) and the Coordinated Direct Investment Survey (CDIS) (see Annex 6). The CPIS provides information, for each contributing country, on cross-border holdings of portfolio investment securities, aggregated by type of security (equity and debt securities valued at market prices) and by country of issuer. Participants apply the definitions and classifications set out in the *Balance of Payments Manual*, fifth edition (*BPM5*).

1.23 The CDIS provides annual data on direct investment positions by immediate counterpart economy, broken down between equity and debt for inward direct investment (i.e., direct investment into the reporting economy) and, where relevant, for outward direct investment (i.e., direct investment abroad by the reporting economy) as of end of year.

The Conceptual Framework

1.24 The development of securities markets in individual countries has been largely determined by national regulations for listing, trading, and settlement. As a result, securities markets differ considerably across countries and existing statistical presentations vary. While it is not always easy to compare the various presentations, it is possible to develop a standard conceptual framework.

1.25 The *Handbook* is consistent with existing international statistical standards, notably the *2008 SNA* and the *BPM6*. The definitions used in the *Handbook* to identify, classify, value, and record positions and flows of securities are in line with these standards. A consistent application of the definitions enables the statistics to be compared within an economy and across countries. It also promotes efficiency in data preparation, facilitates a better understanding of the data, and improves their analytical power.

1.26 The conceptual framework developed in the *Handbook* complements these standards by

addressing additional issues such as borderline cases and related operations. In particular, the *Handbook* gives guidance on debt securities statistics by issuer, currency, maturity, type of interest rate, and country. Various types of breakdown for statistics on issuance and holdings of equity securities are also described, for example, breakdowns by issuer and holder, by type of equity security, by counterparty sector and country, and by currency of denomination for holdings.

1.27 The *Handbook* also refers to other international statistical manuals and guides, including the IMF's *Monetary and Financial Statistics Manual (MFSM)* and its accompanying *Compilation Guide (MFSCG)*, *Government Finance Statistics Manual 2014 (GFSM 2014)*, *Coordinated Portfolio Investment Survey Guide*, second edition, *Coordinated Direct Investment Survey Guide*, *External Debt Statistics Guide* and the *Public Sector Debt Statistics Guide*.

1.28 The *Handbook* focuses on concepts and the presentation of securities statistics. It is not intended to be a compilation guide. The *Handbook* does not provide data sources or uses, or methods for compiling statistics, nor does it give practical advice on questions such as frequency and the timeliness with which statistics are to be compiled and disseminated.

Presentation Tables

1.29 The *Handbook* provides three sets of presentation tables:

- Type A presentation table (e.g., Tables 1.2 and 1.3) are based on the “residence of issuer” approach, in line with international statistical standards. They group into sectors the resident institutional units that issue debt and equity securities.
- Type B presentation tables (e.g., Table 1.4) are based on the “residence of holder” approach, in line with international statistical standards. They group into sectors the resident institutional units that hold debt and equity securities.
- Type C presentation tables (e.g., Table 1.5) show issuance and holdings of securities based on the “from-whom-to-whom” approach.

1.30 The three types of tables may be designed in such a way to show, for a given period, the initial positions at the beginning of the period, transactions and other flows (i.e., revaluations and other changes in the volume of assets and liabilities) during the period, and the closing positions at the end of the period for securities issued by resident and nonresident institutional units.

1.31 Resident institutional units issuing or holding securities are grouped into five resident sectors: non-financial corporations, financial corporations, general

Table 1.2 Type A Presentation Table (“Residence of Issuer” Approach, Unconsolidated) for Securities

Issuers		Residents					Non-residents	All issuers	
		NFCs	FCs	GG ¹	HHs and NPISHs ¹	All residents			
Residence of issuer	Residence of holder	1	2	3	4	5	6	7	
Residents	1								Residence of holder
Nonresidents	2								
All holders	3								

¹Households and NPISHs are not expected to issue securities, although there are exceptional cases in which they may be legally entitled to issue debt securities, e.g., to finance the purchase of dwellings by households. General government is not expected to issue equity securities. However, in cases in which public corporations issuing shares are classified as part of general government, general government is treated as an issuer of equity securities.

Note: NFCs = nonfinancial corporations; FCs = financial corporations; GG = general government; HHs = households; NPISHs = nonprofit institutions serving households.

		Issuers	Residents				Non-residents	All issuers	Location of issue
			NFCs	FCs	GG	HHs and NPISHs			
Market, currency, maturity, and interest rate	Domestic market	Currency Maturity Interest rate							
	International markets	Currency Maturity Interest rate							
	All markets	Currency Maturity Interest rate							
		Residence of issuer							

Note: NFCs = nonfinancial corporations; FCs = financial corporations; GG = general government; HHs = households; NPISHs = nonprofit institutions serving households.

Holders		Residents					Non-residents	All holders	Residence of issuer
		NFCs	FCs	GG	HHs and NPISHs	All residents			
Issuers	1	1	2	3	4	5	6	7	
	2								
	3								
		Residence of holder							

Note: NFCs = nonfinancial corporations; FCs = financial corporations; GG = general government; HHs = households; NPISHs = nonprofit institutions serving households.

government, households, and nonprofit institutions serving households (NPISHs).

The “Residence of Issuer” Approach

1.32 The presentation in Table 1.2 shows securities issuance. As a summary table, it aggregates the resident institutional units issuing debt or equity securities, providing data for the main institutional sectors. Depending on the purpose of the table, resident institutional sectors may be broken down further into subsectors.

1.33 Table 1.2 includes a breakdown of holders by place of residence, as securities held by residents and non-residents must be identified separately. This is indicated in row 1 and row 2 and in column 1 to column 5. Securities issued by nonresidents and held by residents are shown in the cell at row 1, column 6, and shaded grey.

1.34 Securities issued by nonresidents and held by nonresidents are not covered, as these are not relevant from a national economy’s perspective. These

Table 1.5 Type C Presentation Table (“From-Whom-to-Whom” Approach, Unconsolidated) for Securities

Holders by residence and by resident sector		Residents				Non-residents	All Holders	Residence of issuer
		NFCs	FCs	GG	HHs and NPISHs			
Issuers by residence and by resident sector,	Residents							
		Nonfinancial corporations						
	Financial corporations							
	General government							
	Households and NPISHs							
	Nonresidents							
	All issuers							
		Residence of holder						

Note: NFCs = nonfinancial corporations; FCs = financial corporations; GG = general government; HHs = households; NPISHs = nonprofit institutions serving households.

securities are shown in the cell at row 2, column 6, and shaded black.

1.35 Debt securities issuance may be split in accordance with five criteria: issuer, currency, maturity, interest rate, and market. These classification criteria are consistent with international statistical standards and are discussed in further detail in the relevant chapters of the *Handbook*.

1.36 As an extension to the “residence of issuer” approach, the “location of issue” approach is presented in Table 1.3 for debt securities. In this approach, debt securities statistics are shown according to the geographic or jurisdictional location of debt securities markets, with data presented on debt securities that have been issued in the domestic market by residents and nonresidents, and in the international markets by residents.

1.37 When collected for many markets, these statistics—with further breakdowns of debt securities issues by currency, maturity, and interest rate—are useful for assessing the relative importance of financial centers. The data can also indicate the motivation of debtors and creditors, such as the attractiveness of the domestic market to foreign investors, and possible liquidity risk.

The “Residence of Holder” Approach

1.38 The presentation in Table 1.4 shows securities holdings of resident and nonresident institutional units, with the same sectoring as in Table 1.2. Resident institutional units hold securities issued by residents and nonresidents.

1.39 Table 1.4 includes a breakdown of issuers by place of residence, as securities issued by residents and nonresidents must be identified separately. This is indicated in row 1 and row 2 and in column 1 to column 5. Securities held by nonresidents and issued by residents are shown in the cell at row 1, column 6, and shaded grey.

1.40 Holdings of nonresidents of securities issued by nonresidents are not covered, as they are not relevant from a national economy’s perspective. These holdings are shown in the cell at row 2, column 6, and shaded black.

The “From-Whom-to-Whom” Approach

1.41 The presentation in Table 1.5 shows the issuance and holdings of securities on a “from-whom-to-whom” basis. As a summary table, it shows the relationships between resident sectors as holders and residents and

nonresidents as issuers, and between nonresidents as holders and residents as issuers of securities.

1.42 For a national economy, it shows securities held by residents grouped into resident sectors, as in Table 1.2 and Table 1.4, and by nonresidents vis-à-vis institutional units as issuers, broken down by residence and by institutional sector.

1.43 For residents, the presentation of unconsolidated data on securities holdings is recommended. This enables intra-sectoral positions, transactions, revaluations, and other changes in the volume of assets of securities issues and holdings to be shown (cells with medium gray shading).

1.44 As also indicated in Table 1.2 and Table 1.4, the holdings of nonresidents of securities issued by nonresidents are not covered (black cell). Although these are not relevant from a national economy's perspective, they are nevertheless relevant for the compilation of global aggregates.

1.45 Holdings of securities by nonresidents (vis-à-vis resident sectors as issuers), and holdings of securities by residents (vis-à-vis nonresident sectors as issuers) are shown as positions in the rest of the world balance sheet (the international investment position), as financial transactions in the rest of the world financial account (part of the balance of payments), and as revaluations or other changes in the volume of assets in the rest of the world accumulation accounts (cells shaded dark gray in the nonresidents' row and column of Table 1.5).

1.46 Additional breakdowns of resident holders by financial corporation subsector and by general government subsector and of nonresident issuers by country and/or sector may be considered.

The Structure of the *Handbook*

1.47 The *Handbook* is structured as follows. After this introductory chapter (Chapter 1), Chapter 2 considers the main features of securities as financial instruments. Chapter 3 describes the various instruments classified as debt and equity securities. Chapter 4 looks at institutional units and sectors, while Chapter 5 deals with positions, flows, and accounting rules for securities. Chapter 6 looks at specific operations relating to debt and equity securities. Chapter 7 provides information on the various classification schemes of securities. Chapter 8 describes issuance and holdings of debt and equity securities in a “from-whom-to-whom” framework, and Chapter 9 contains a set of detailed presentation tables based on the concepts and guidelines outlined in Chapters 2 to 8.

1.48 The *Handbook* has eight annexes. Annex 1 illustrates the relationship between market value and nominal value for positions in debt securities. It also considers how to record the accrual and payment of interest for different types of debt security. Annex 2 deals with structured debt securities, while Annex 3 covers Islamic securities. Annex 4 explains the concept and design of SBS databases and how to link these databases with statistics on securities holdings. Annex 5 covers metadata for debt and equity securities statistics. Annex 6 describes the IMF's CPIS and CDIS; both surveys contribute greatly to the presentation of debt and equity securities in a “from-whom-to-whom” framework. Annex 7 looks at the 2008 SNA and the concept of corporate groups as holders of securities, as well as ownership structures. Finally, Annex 8 presents various valuation methods for unlisted shares.



2

Main Features of Securities

2.1 Chapter 2 defines securities, debt securities, and equity securities; sets out the criteria for distinguishing securities from other types of financial instruments; and outlines the main features of debt and equity securities.

2.2 Securities include debt securities, equity securities and, to some extent, investment fund shares or units. Financial instruments can be distinguished on the basis of negotiability. A financial instrument is negotiable if legal ownership of the instrument can be easily transferred from one institutional unit to another by means of delivery or endorsement (or be offset in the case of financial derivatives). While any financial instrument can potentially be traded, negotiable instruments are designed to be traded on an organized exchange or over-the-counter (OTC), although actual trading is not a necessary condition for negotiability.

2.3 The criteria for a financial instrument to be considered negotiable are: (1) the ability to be transferred to another person's legal ownership (or offset in the case of financial derivatives); (2) standardization (often evidenced by fungibility) and an eligible International Securities Identification Number (ISIN); and (3) no right of recourse against previous holders of the relevant asset.

2.4 Currency and deposits, loans, money market fund (MMF) shares or units, open-ended investment fund shares or units, other equity, and other accounts receivable or payable are not typically negotiable—neither are insurance, pension, or standardized guarantee schemes. Securities, financial derivatives, monetary gold, and special drawing rights (SDR) are all negotiable financial instruments.

2.5 Debt securities are negotiable financial instruments serving as evidence of a debt (2008 SNA, paragraph 11.64). Equity securities, which are also called shares (both listed and unlisted), are securities

acknowledging claims on the residual value of a corporation after the claims of all creditors have been met (2008 SNA, paragraph 11.83). Investment fund shares or units are issued by investment funds: collective investment undertakings through which investors pool funds for investment in financial and nonfinancial assets (2008 SNA, paragraph 11.94).

2.6 The different types of security can also be distinguished by type of income. While debt securities accrue interest, equity securities pay dividends, and investment fund shares or units pay investment fund income (see Table 2.1).

2.7 Financial derivatives are not classified as securities even if they are negotiable financial instruments. No principal amount is advanced that has to be repaid and no investment income accrues (MFSM, paragraph 176). Financial derivatives are instruments linked to specific financial or nonfinancial assets or indices through which specific financial risks can be traded in their own right in financial markets.¹

Debt Securities

Quantitative Features

2.8 Debt securities should display all, or most, of the following quantitative characteristics: (1) an issue date; (2) an issue price; (3) a redemption price (or face value); (4) a maturity (or redemption date); (5) the coupon rate that the issuer pays to the holders; (6) the coupon dates; and (7) the currency of denomination and settlement.

Issue date

2.9 The issue date is the point in time at which the debt security is issued.

¹Listed financial derivatives (such as warrants) are sometimes regarded as securities (BPM6, paragraph 5.15).

Table 2.1 Types of Security

	Debt securities	Equity securities	Investment fund shares or units
Main characteristics	Issuer is obliged to pay a specified amount of principal and interest to the owner	Acknowledgement of claims on the residual value of a corporation after the claims of all creditors have been met	Issued by collective investment undertakings and represent a share in an investment portfolio
Type of income	Interest receivable	Dividends	Investment fund income

Issue price

2.10 The issue price is the price at which investors buy the debt securities when first issued. The issue price can be at par, above par, or below par.

Redemption price

2.11 The redemption price, or face value, is the amount to be paid by the issuer to the holder at maturity.

Maturity

2.12 The redemption (or maturity) date is the point in time at which the final contractually scheduled repayment of the principal is due.² There are two different concepts of maturity: (1) short- and long-term maturity; and (2) original and remaining maturity. These concepts can be used to analyze debt securities issuance and holdings activity, the debt position of issuers, and their debt servicing capacity. Statistics on debt securities issues and holdings classified by maturity are also helpful for liquidity analysis.

Short-term and long-term maturity

2.13 Debt securities can be issued with a short- or long-term maturity. A debt security with a short-term maturity is defined as one that is payable on demand³ or in one year or less. A debt security with a long-term maturity is defined as one that is payable in more than

one year or that has no stated maturity (*BPM6*, paragraph 5.103).

Original and remaining maturity

2.14 Original maturity is the period from the issue date until the final contractually scheduled payment (*BPM6*, paragraph 5.104 (a)). Debt securities that have an original maturity of one year or less, or that are payable on demand, are classified as short-term, even if they are issued under long-term facilities, such as note issuance facilities (NIF). Debt securities that have an original maturity of more than one year are classified as long-term. This category also covers debt securities with optional maturity dates, the latest of which is more than one year away, and those with indefinite maturity dates (*2008 SNA*, paragraph 11.71).

2.15 Debt securities giving the creditor the option of early redemption are classified according to the original maturity date, but additional information on payments on the basis of the earliest repayment date should also be provided. Debt securities in which a certain portion of the issue is retired periodically (sinking fund provision) are classified according to the earliest date that the debt security can be completely repaid. Debt securities that do not mature at all, that is, have no stated maturity date (perpetual securities and some preferred shares) are classified as long-term.

2.16 Remaining (or residual) maturity of a debt security is the period from the reference date until the final contractually scheduled payment (*BPM6*, paragraph 5.104 (b)). In this case, short-term debt securities comprise those securities with an original maturity of one year or less, and those with an original maturity of more than one year that will mature within one year.

² The maturity date may coincide with the conversion of a debt security into an equity security. In this context, convertibility means that the holder may exchange a debt security for the issuer's common equity. Exchangeability means that the holder may exchange the debt security for equity securities of a corporation other than the issuer. Perpetual securities and some preferred shares, which have no stated maturity date, are classified as debt securities.

³ *Payable on demand* refers to a demand for payment issued by the creditor.

Coupon rate and dates

2.17 Debt securities generate property income in the form of interest receivable. Owners of debt securities are entitled to interest receivable as a result of having placed funds at the disposal of the issuers.

2.18 Interest payable and receivable is determined by: (1) the coupon that the issuer pays to the holders, which may be fixed throughout the life of the debt security or vary with inflation, interest rates, or asset prices;⁴ and (2) the coupon dates on which the issuer pays the coupon to the securities' holders.

2.19 Accordingly, debt securities may be fixed interest rate, variable interest rate, or mixed interest rate debt securities.

Currency

2.20 The issue price, redemption price, and coupon may be denominated (or settled) in either domestic currency or foreign currencies.

2.21 Domestic currency is that which is legal tender in an 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 (*BPM6*, paragraph 3.95). Statistics on debt securities issues can therefore be classified according to whether the issues are denominated in domestic currency or foreign currencies. These data can be aggregated to show debt securities issued in all currencies.

2.22 Debt securities with both their principal and coupon linked to a foreign currency are classified as though they are denominated in that foreign currency (*BPM6*, paragraph 11.50 (b)).

Qualitative Features

2.23 Qualitative features of debt securities include:

- The documents specifying the rights of debt securities issuers, in the form of indentures or covenants. The contract terms may be changed only with great difficulty, with amendments generally requiring approval by a majority vote of the debt securities' holders.

- The default risk attached to debt securities, which is the creditworthiness of individual debt securities issues assessed by credit rating agencies.

Equity Securities

2.24 From an assets perspective, equity securities are a form of financial investment. The following types of financial investment can be distinguished based on the kind of investor involved: (1) portfolio investment, involving widely held equity securities (most of which are listed); (2) intercompany equity securities, involving ownership links between related units and which are associated with direct investment, with a mixture of listed and unlisted shares; and (3) equity securities relating to privately owned corporations. Privately owned corporations are owned by a single shareholder or a small group of shareholders—typically from the household sector—and are not generally listed.⁵

2.25 From a liabilities perspective, equity securities are a form of “external” corporate finance. Raising equity capital through the issuance of shares is an alternative to borrowing. In contrast to debt securities, equity securities do not generally give their owners the right to a predetermined amount or an amount determined in accordance with a fixed formula (*2008 SNA*, paragraph 11.81). Moreover, equity securities are a measure of the value of a corporation—the market value of outstanding shares being related to perceptions of future earnings—and a measure of net worth.

2.26 The main features of equity securities are: (1) they are claims by shareholders on the net worth of the issuing corporation; (2) they are either listed on a stock exchange or unlisted; (3) they are issued on a specific issue date with a specific issue price; (4) they do not usually have a stated maturity; (5) they are usually issued in the domestic currency; and (6) they generate income in the form of dividends.

Residual Claim

2.27 The main feature of equity securities is that holders have a claim on the residual value of the corporation that issued those securities, after the claims of all creditors have been met.

⁴Some debt securities have no coupon payments during their life, with the full return being paid at maturity (zero-coupon bonds), while some structured debt securities pay no coupon at all (see Annex 2).

⁵These three different types of financial investment in equity securities are not reflected in the presentation tables in Chapter 9 of the *Handbook*.

Marketplace, Listing and Delisting

2.28 Listed equity securities are listed (or “quoted”) on a stock exchange. A corporation is said to be “listed” or “quoted,” or “have a listing” if its shares can be traded in a marketplace or a stock exchange, which can be a recognized stock exchange or any other form of organized secondary market. The issuing corporation usually applies to be listed, but, in some countries, a stock exchange can itself decide to list a corporation (e.g., because its stocks are already actively being traded via informal channels).

2.29 Inclusion in the official share register is a prerequisite for trading on a stock exchange. Initial listing requirements usually include:

- Recent years’ financial statements
- Placement among the general public of a sufficient amount of stocks, both in absolute terms and as a percentage of total outstanding stocks
- An approved prospectus (usually taking account of the views of independent assessors).

2.30 Corporations may be listed in more than one marketplace through secondary listings or the more complex dual-listing procedure.

2.31 It is common for one such listing to be a primary listing and the others secondary listings. Having multiple listings (i.e., being entered in multiple share registers) gives an issuer access to a wider pool of investors. Although there are mechanisms that allow multiple primary listings, these are more complex and expensive. Moreover, a corporation entered on one single share register can still access multiple trading platforms in order to widen the marketplace for its equity securities. Secondary listings may be direct listings of the equity securities concerned, or they may be listings of depository receipts (see paragraphs 3.26 to 3.32).

2.32 A dual listing enables a corporation to have two equal listings in different marketplaces. This is usually done by creating an ownership structure comprising two holding companies, each of which is listed in a different marketplace. Each of these then owns a percentage of the corporation. Dual listing may be the result of a merger of two corporations listed in different countries, or it may stem from a new listing aimed at gaining access to capital in a larger market. Trading restrictions (e.g., capital or currency controls) can also create the need for a dual listing.

2.33 Specific corporate governance requirements apply to dual-listed corporations. Equal rights in terms of voting and dividends for the shareholders of the two listed corporations must be guaranteed and supported by an appropriate management structure.

2.34 “Dark pools” are platforms for market participants who want to carry out major transactions not visible to other market participants. Such transactions are conducted outside the stock exchange.

2.35 “Delisting” refers to the practice of removing a corporation’s shares from a stock exchange. This occurs when a corporation goes out of business, declares bankruptcy, no longer satisfies the listing requirements of a stock exchange, or becomes a quasi-corporation or unincorporated business, often as a result of a merger or acquisition. Delisting may also involve a corporation being taken into private hands (e.g., by a private equity fund). It then remains incorporated.

Issue Date

2.36 The issue date is the date on which a corporation issues equity securities to the public. The issuance of equity securities is usually recorded at the point when payment is made.

2.37 If this is the first such offering, it is called an “initial public offering” (IPO), or simply an “offering” or “flotation.” If not, it is called a “follow-on offering.”

2.38 Where unlisted shares are issued, the issue date corresponds to the date when the corresponding capital is paid up.

2.39 In an IPO, the issuer may obtain the assistance of an underwriting entity, which helps to decide what type of equity security to issue, what the best offering price is, and when to bring it to market. The underwriting entity can also help to place the offering with individual and institutional investors.

2.40 An IPO is often facilitated by the issuance of allotment certificates representing the corporation’s shares, which are traded on the stock exchange.⁶ These certificates expire and are converted into shares on a one-to-one basis without any additional payment when the underlying share issue is registered.

⁶Allotment certificates may be issued in the event of secondary listings.

2.41 The widely used “greenshoe” option (or “over-allotment” option) allows an issuer to sell additional shares if the demand for newly issued equity securities exceeds the original offering. This practice is often important in order to provide liquidity and stabilize the share price after the IPO.

Issue Price

2.42 An equity security’s issue price (or “public offering price”) is the price at which it is taken to market at the time of issue.

2.43 When an equity security goes public in an IPO, the underwriter sets a price per share. Subsequent share offerings are also introduced at a specific price.

2.44 The issue price is based on the amount of capital to be raised and the number of shares to be issued. The issue price is set close to the expected market price or the prevailing market price for secondary offerings. When the equity security begins to trade, its market price may be higher or lower than the issue price.

No Stated Maturity

2.45 Equity securities do not usually have specific maturity dates.⁷ Corporations (and therefore equity securities) have no set lifespan, but can be dissolved by means of a statutory operation, an order of court, or a voluntary action on the part of shareholders.

Insolvency may result in a form of a “corporate death,” where creditors force the liquidation and dissolution of the corporation under a court order.

Currency of Denomination

2.46 As equity securities are traded on national stock exchanges, their prices are usually expressed in the domestic currency, the currency of issue.⁸

2.47 There may be cases in which corporations choose to be listed in a country other than their country of residence for strategic or tax reasons, but continue to be listed on their own national stock exchange, with prices expressed in the domestic currency. Alternatively, a corporation may choose, as a resident entity, to be listed on the national stock exchange of another country, but with shares in that corporation traded via depository receipts on the stock exchange of its country of origin.

2.48 Financial investors may hold share portfolios denominated in both their domestic currency and foreign currencies.

Property Income

Equity securities generate property income in the form of dividends. Owners of shares are entitled to dividends as a result of having placed funds at the disposal of corporations (2008 SNA, paragraph 7.128).

⁷“Genußscheine” (or “Genußrechte”) are a type of participation certificate issued mainly in European countries such as Germany, Austria, and Switzerland. They sometimes have a stated maturity.

⁸Corporations can issue equity securities on foreign stock exchanges (e.g., American depository shares), but these are fully indexed to the domestic currency of the country of residence of the issuing corporation, so it is not “foreign currency” (BPM6, paragraph 11.50). In some cases shares are issued in a currency other than the domestic currency (e.g., in euro in non-euro area European Union (EU) Member States).



3

Financial Instruments Classified as Securities

3.1 This chapter describes the different financial instruments that are classified as debt and equity securities, respectively. It also considers borderline cases and lists the financial instruments that are not classified as securities.

Debt Securities

3.2 The most common types of debt security include bills, bonds, notes, negotiable certificates of deposit, commercial paper, debentures, asset-backed securities, and similar instruments normally traded in the financial markets that serve as evidence of a debt.

3.3 Common types of debt security are those sold on:

- A *coupon basis*, stipulating that periodic interest, or coupon payments will be made during the life of the instrument and that the principal will be repaid at maturity.
- An *amortized basis*, stipulating that interest and principal payments will be made in installments during the life of the instrument.
- A *discount*, or zero coupon basis, whereby a debt security is issued at a price that is less than its face (or par) value, and the interest and principal are paid at maturity.
- A *deep discount basis*, whereby a debt security is issued at a price that is less than face value, and the principal and a substantial part of the interest are paid at maturity.
- An *indexed basis*, which ties the amount of interest and/or principal payment to a reference index, such as a price index or an exchange rate index, or to the price of a commodity (e.g., gold).

Bills

3.4 Bills are debt securities that give the holders the unconditional right to receive stated fixed sums on a

specified date. Bills are generally issued with short-term maturities at discounts to face value that depend on the rate of interest and the time to maturity, and are usually traded in organized markets. Examples of such short-term securities are treasury bills, negotiable certificates of deposit, promissory notes, bankers' acceptances, and commercial paper.

Bonds

3.5 Bonds and debentures are long-term debt securities that give the holders the unconditional right to fixed payments or contractually determined variable payments on a specified date or dates, that is, the earning of interest is not dependent on earnings of the debtors. Bonds and debentures also give holders the unconditional right to fixed sums as payments to the creditor on a specified date or dates.

Asset-backed Securities

3.6 Asset-backed securities (ABSs) are created through the securitization of various categories of loan. Income payments and repayment of the principal are derived from and collateralized by a specified pool of underlying assets. ABSs are classified as debt securities because the security issuers have an obligation to make payments, while the holders do not have a residual claim on the underlying assets. The process of securitization is explained in Chapter 6 of this *Handbook*.

Equity Securities

3.7 Equity securities are commonly called shares. Shares (or "stocks," the meaning is identical) are claims on the residual value of a corporation after the claims of all creditors have been met. Shares may be listed (F511) or unlisted (F512), and may be ordinary shares or preferred shares.

Listed and Unlisted Shares

Listed shares

3.8 Listed shares are listed (or registered) on a stock exchange, which can be a recognized stock exchange or any other form of organized secondary market. Listed shares are also referred to as “quoted shares.” The existence of quoted prices for shares listed on an exchange usually means that current market prices are readily available.

3.9 A share may be listed, but traded only very infrequently, or not at all (e.g., in the case of closely held corporations¹). Stock exchanges are often divided into market segments (e.g., an official market, a second regulated market, and a third market), with shares in some of these segments (usually third markets) traded less frequently. Consequently, prices may not be available on a daily basis but only at certain points in time, for example, when transactions take place or when positions are valued (which may occur at specific intervals, such as at the end of each month).²

3.10 In addition to paying regular listing fees, a corporation must fulfill certain requirements, such as having a minimum asset base and publishing specific financial information, both at the time of listing and periodically thereafter.

Unlisted shares

3.11 Unlisted shares are not listed (or registered) on a stock exchange. They are also referred to as “unquoted shares” and sometimes “private equity.” Venture capital usually takes this form. Because prices may not be observable for unlisted shares, other valuation methods may have to be applied (see Annex 8).

3.12 Holders of unlisted shares do not enjoy the protection that the stock exchange offers holders of listed shares. Trading unlisted shares can also be difficult.

3.13 Unlisted shares are issued by limited liability companies as follows:

- Capital shares give holders the status of joint owners of the company and entitle them to a

¹Closely held corporations are corporations that are owned by a small number of shareholders. Their shares are usually traded less frequently.

²There are other types of trading platform, such as over-the-counter (OTC) exchanges. Large numbers of shares are traded on these exchanges, but they may not be liquid enough to be officially listed.

share in the total distributed profits, as well as a share in the company’s net assets in the event of liquidation.

- Redeemed shares are shares whose capital has been repaid, but are retained by holders who continue to be joint owners and remain entitled to a share in the profits left after dividends have been paid on the remaining registered capital, as well as a share in any surplus in the event of liquidation (i.e., net assets minus the remaining registered capital).
- Dividend shares (sometimes also called “founders’ shares” or “profit shares”) are not part of the registered capital and do not give holders the status of joint owners. Consequently, holders do not have the right to a share in the repayment of registered capital, nor do they have the right to a return on this capital, or vote at shareholders’ meetings, and so on. Nevertheless, holders are entitled to a share of any profits remaining after dividends have been paid on the registered capital and a share in any surplus remaining in the event of liquidation.
- Participating preferred shares or stocks give holders the right to participate in the distribution of the residual value of the company on dissolution. Holders also have the right to participate in, or receive, additional dividends over and above the fixed percentage dividend (see paragraph 3.25 below). Additional dividends are usually paid in proportion to any ordinary dividends declared. In the event of liquidation, participating preferred shareholders have the right to a share in any surplus, as well as receiving back whatever they paid for their shares.

Ordinary and Preferred Shares

Ordinary shares

3.14 Ordinary shares (or “common” shares) usually give holders the right to the following:

- Holders are generally entitled to participate in the corporation’s general policymaking and have the right to attend, speak, and vote (in the case of voting shares) at general meetings. Holders of ordinary shares can vote on corporate objectives and matters of policy, on stock splits, and to elect the corporation’s board of directors.

- Holders are usually entitled to a preferential subscription in the event of a capital increase. Some holders of ordinary shares also receive preemptive rights (a rights issue), which enables them to retain their proportional share in the ownership of a corporation should it issue more stock.
- Holders generally have the right to a share in the corporation's profits. However, no fixed dividends are paid out to ordinary shareholders. Ordinary shareholders' returns are therefore uncertain and dependent on earnings, corporate reinvestment, and the market's ability to value and sell stock efficiently.

3.15 The difference between ordinary shares and preferred shares can be seen in terms of the rights holders enjoy and the terms and conditions under which the shares are issued. Holders of preferred shares have priority over holders of ordinary shares when it comes to laying claim to a corporation's assets. However, while preferred shares may have priority over ordinary shares in the payment of dividends and in the event of liquidation, they are subordinated to debt securities.

3.16 Ordinary shares (and their certificates)³ may be "bearer" shares. Holders of bearer shares remain anonymous, even to the issuer. Holders of other registered shares are recorded in the corporation's share register.

3.17 Priority shares are registered shares that give the holder specific powers, such as the power to nominate candidates for the board of directors. They often also give the holder special rights with regard to amending the corporation's statute.

3.18 Occasionally, nonvoting shares are issued. These have a marginally higher dividend, but may be less liquid.

3.19 Deferred shares have fewer or no voting rights and, in the event of bankruptcy, holders are not entitled to a share in the corporation's assets until all ordinary and preferred shareholders have been paid in full as per the nominal (par) value of their shares. Deferred shareholders then receive a share of any surplus remaining.

3.20 In the event of bankruptcy, holders of ordinary shares receive their funds after preferred shareholders, bondholders, creditors, etc.

Preferred shares

3.21 Preferred shares (or "preference shares," "preferred stocks," or "participating preferred shares") typically rank higher than ordinary shares. They may carry superior voting rights relative to ordinary shares (sometimes up to two votes per share), or no voting rights at all.

3.22 Where the preferred shares do not carry voting rights, shareholders do not have the right to vote at shareholders' meetings. This is usually offset by higher dividends, or the right to a larger share in the distribution of the residual value of a corporation on dissolution.

3.23 Preferred shares may entitle their holders to a preferential dividend, which may, at times, be higher than the dividends paid to ordinary shareholders. They may also be convertible into ordinary shares, or they may entail preferential rights in the event of liquidation. Preferred shares may carry the right to a specific dividend, paid ahead of dividends to holders of ordinary shares, and take precedence over ordinary shares in the event of liquidation.

3.24 Like ordinary shares, preferred shares represent partial ownership of a corporation. Unlike ordinary shares, however, preferred shares often pay a fixed dividend (although the corporation does not have to pay this dividend if it lacks the financial means to do so).

3.25 Table 3.1 provides an overview of various types of preferred shares. In general, preferred shares comprise the following:

- Cumulative or noncumulative preferred shares, depending on whether dividends payable are accumulated or not.
- Participating or nonparticipating preferred shares, depending on whether they confer the right to a share in the residual value of the corporation on dissolution (with participating preferred shares treated as equity securities, regardless of whether the income is fixed or determined according to a formula, while nonparticipating preferred shares are classified as debt securities).
- Convertible or exchangeable preferred shares, depending on whether they can be converted into a specified amount of ordinary shares or bonds.

³ Ordinary share certificates often carry limited voting rights.

Table 3.1 Types of Preferred Shares

Type	Description	Classification
Cumulative preferred shares	Holders are entitled to receive a fixed dividend ahead of ordinary shares and retain the right to any accumulated preferred dividends that may have built up.	Equity securities
Noncumulative preferred shares	Holders are not entitled to accumulate preferred dividends.	Equity securities
Participating preferred shares	Holders are entitled to participate in the profits of a corporation over and above fixed dividends by means of an additional fluctuating dividend. They also participate in the distribution of the residual value of a corporation on dissolution.	Equity securities (regardless of whether income is fixed or determined according to a formula)
Participating convertible preferred shares	Holders are entitled to receive the dividends that holders of preferred shares are eligible to receive. Holders are also allowed to convert preferred shares into ordinary shares in order to claim excess earnings.	Equity securities
Nonparticipating preferred shares	Holders are entitled to receive a fixed dividend, but do not participate in the distribution of the residual value of a corporation on dissolution.	Debt securities (with income from nonparticipating preferred shares treated as interest income, rather than dividends)
Redeemable preferred shares	These can be redeemed at the request of either the corporation or the shareholder (at a fixed price on a specified date or during a specified period of time). Strict conditions apply to the issuance of redeemable shares and their redemption. Instead of cancelling shares on redemption, a corporation may continue to hold such shares as treasury shares, but no voting rights may be exercised and no dividends are payable.	Equity securities
Retractable preferred shares	These include features that allow holders to demand that the corporation redeem the share on a specific date.	Equity securities
Straight perpetual preferred shares	These have no maturity date and pay fixed dividends for as long as they remain outstanding.	Equity securities
Rate reset or fixed floating rate preferred shares	These pay fixed dividends until the reset date, which is typically also the call date.	Equity securities
Floating rate preferred shares	These pay dividends on a quarterly (or in some cases monthly) basis. Dividends fluctuate in relation to a reference rate, usually a prime rate, although some may have a "floor," or minimum dividend.	Equity securities
Structured preferred shares	These are synthetic preferred shares based on an underlying portfolio of ordinary shares or a portfolio created from diverse or complex financial instruments, including financial derivatives.	Equity securities or financial derivatives

- Redeemable or retractable preferred shares, which are redeemed or retracted at a fixed price on a specified date or during a specified period of time at the request of either the corporation or the holder.
- Straight perpetual preferred shares, rate reset preferred shares, fixed floating rate preferred shares, and floating rate preferred shares, all of which have different dividend payment patterns.
- Split and structured preferred shares, which are based on an underlying portfolio of ordinary shares or other financial instruments.

Borderline Cases

Depository Receipts

3.26 Depository receipts represent ownership of securities issued in other economies. Ownership of the receipts is treated as direct ownership of the underlying financial instrument backing them (i.e., the relevant debt or equity security).⁴ A resident deposit-taking corporation will purchase the underlying securities and then issue receipts in a currency more acceptable to the investor.

3.27 Depository receipts allow a nonresident institutional unit to introduce its debt or equity securities on another market in a form more readily acceptable to the investors in that market. Financial investors frequently prefer to acquire securities in financial markets where the payments and settlement systems, registration procedures, and other arrangements are familiar, rather than in the home market of the issuer. The depository issues receipts listed on one exchange representing ownership of securities listed on another exchange.

3.28 For instance, American depository receipts (ADR) are liabilities of the non-U.S. institutional units whose securities underlie the ADR, not of the U.S. financial institutions issuing the ADR. Depository receipts have spread to other countries in the form of global depository receipts (GDR), European depository receipts (EDR), and international depository receipts (IDR).

3.29 GDR are securities available in one or more markets outside the corporation's country of residence. The primary advantage of GDR, compared with ADR, is that they allow the issuer to raise capital on two or more markets simultaneously, increasing its shareholder base. They have also gained in popularity owing to the flexibility of their structure. A GDR represents one or more shares (or a fraction of a share) in a corporation. The depository bank in the country of residence holds the shares. A GDR investor has the same rights as holders of ordinary shares, but does not typically have voting rights. Sometimes the depository bank can vote on behalf of GDR holders. GDR are commonly listed on European stock exchanges (e.g., the London Stock Exchange). Both ADR and GDR are usually denominated in U.S. dollars, but they

can also be denominated in other currencies, such as the euro. Corporations have a choice of four types of depository receipt: unsponsored depository receipts and three levels of sponsored depository receipts.

- Some depositories issue unsponsored depository receipts in response to market demand, but without a formal agreement with the corporation in question. Unsponsored depository receipts are considered to be obsolete and do not tend to be issued owing to the corporation's lack of control and hidden costs.
- Alternatively, a depository (appointed by the relevant corporation under a deposit agreement or service contract) may issue sponsored depository receipts. Sponsored depository receipts offer the corporation control over the facility, the flexibility to list on other exchanges, and the ability to raise capital.
- A sponsored level I depository receipt program is the simplest way for corporations to access capital markets. Level I depository receipts are traded in the U.S. over-the-counter (OTC) market and on some exchanges outside the United States. The corporation does not have to comply with the U.S. Generally Accepted Accounting Principles (GAAP) or full U.S. Securities and Exchange Commission (SEC) disclosure. Essentially, a sponsored level I depository receipt program allows a corporation to enjoy the benefits of a publicly traded security without changing its reporting process.
- Corporations that wish to either list their securities on an exchange in the U.S. or raise capital use sponsored level II or III depository receipts, respectively. These types of depository receipt can also be listed on some exchanges outside the United States. There are different SEC registration and reporting requirements for each level, in addition to adherence to the U.S. GAAP. The corporations must also meet the listing requirements of the U.S. exchanges that they choose. Generally, the higher the level of the depository receipt program, the greater the visibility and attractiveness of the depository receipt.

3.30 In addition to the three levels of publicly traded sponsored depository receipt programs, a corporation can also access the U.S. and other markets through the private placement of sponsored depository receipts.

⁴This treatment is justified because the "issuer" (the deposit-taking corporation) does not take the underlying securities on to its balance sheet, but rather acts as a facilitator (*External Debt Statistics Guide*, Appendix I).

This allows a corporation to raise capital by placing depository receipts with large institutional investors in the U.S., avoiding SEC registration.

3.31 Where possible, depository receipts should be recorded in such a way that “looks through” the depository issuing the receipts, that is, the holder of the receipts should be considered to have a claim on the issuer of the underlying securities. Depository receipts should be allocated to the country of residence of the issuer of the original (or underlying) security, not the country of residence of the depository issuing the receipts.

3.32 The potential for double counting lies in the existence of both the underlying security, held by the depository, and the associated depository receipts. To avoid double counting, financial intermediaries should not report holdings of securities issued by nonresidents against which depository receipts have been issued and sold. If a depository receipt has been issued before the financial corporation arranging the issue has acquired the original (or underlying) securities, that financial corporation should report negative holdings of the original (or underlying) securities.

Negotiable Loans

3.33 Debt securities may include loans that have become negotiable de facto, but only if there is evidence of secondary market trading, including the existence of market makers, and frequent quotations of the instrument, such as provided by bid-offer spreads (2008 SNA, paragraph 11.65). The conversion of a loan into a debt security should be recorded as two flows, that is, a decrease in the loan and an increase in debt securities arising from the statistical reclassification of the loan.

Private Placements

3.34 Debt securities can also be issued as private placements. Private placements involve the issuer selling debt securities directly to a small number of investors. The creditworthiness of private placements is usually not assessed by credit rating agencies and, as the securities are generally not resold or repriced, their secondary market is shallow. However, to the extent that some private placements can be traded among investors—and so ownership is readily capable of being transferred—the main negotiability criterion for securities is met.

Structured Debt Securities

3.35 Debt securities that combine different features of financial instruments are more challenging to classify. This is particularly the case for so-called structured debt securities, which are a subset of structured securities.

3.36 A structured debt security typically combines a debt security, or a basket of debt securities, with a financial derivative, or a basket of financial derivatives. This financial derivative, or the basket, is typically embedded in and therefore inseparable from the debt security. When the debt security and financial derivative components of a financial instrument are separable from each other they should be classified accordingly. If they cannot be separated, however, the instrument should be valued and classified according to its primary characteristics (BPM6, paragraph 5.83 (d)), either as a debt security or a financial derivative. For further details on structured debt securities, see Annex 2.

Islamic Debt Securities

3.37 Debt securities also encompass financial instruments governed by Islamic rules and principles (Shari’ah). Islamic finance uses financial instruments that are backed by returns from a nonfinancial asset and earn a variable rate of return tied to the performance of the asset, or returns that are not specified before the investment is made, but shared on the basis of a pre-agreed ratio of actual earnings. Islamic debt securities are distinguished from equity securities by two categories of criteria. The first category comprises criteria used to differentiate conventional debt securities from equity securities. The second category comprises additional criteria used to distinguish Islamic debt securities from equity securities. These criteria and other details concerning Islamic securities are outlined in Annex 3.

Convertible Bonds

3.38 Convertible bonds are debt securities that can be converted into equity securities (although some are included in capital under the Basel III definition). From the time they are converted, they are classified as equity securities.

3.39 When the option to convert the bonds into shares is exercised, two entries must be made showing the redemption of the bonds and the issuance/acquisition of the shares.

Securities Repurchase Agreements

3.40 A securities repurchase agreement is an arrangement involving the provision of securities in exchange for cash with a commitment to repurchase the same or similar securities at a fixed price either on a specified future date, or with an “open” maturity. Securities lending with cash collateral and sell/buybacks are terms for different arrangements having the same economic effect as a securities repurchase agreement. Economic ownership of the securities provided as collateral under such agreements is considered not to have been transferred because the cash recipient (the seller of the securities) remains subject to all market risks and continues to receive any benefits. Therefore, transactions involving securities repurchase agreements and securities lending do not entail a new issuance of debt securities, but rather the incurrence of collateralized loans. These transactions are therefore excluded from debt securities statistics.

Equity Certificates

3.41 Equity certificates (or “primary capital certificates”) are shares issued by savings banks and other financial institutions that are not limited liability companies or public limited companies. These can be either listed (mainly equity certificates issued by savings banks), or unlisted.

Equity-linked Notes

3.42 Equity-linked notes (ELN)—a type of equity-linked instrument (ELI)—are debt securities that differ from fixed interest rate debt securities in that their coupons or redemption values are based on the return for a single share, a basket of shares (whether listed or unlisted), or an equity index (the “underlying equity”). This means that ELNs are generally designed to return the principal of the original investment at maturity, but, unlike fixed interest rate debt securities, their coupons are determined by changes in the value of the underlying equity. Moreover, unlike structured warrants, the principal is usually protected.

3.43 An ELN can be constructed by packaging a call option and a zero-coupon bond. The call option provides the note buyer with exposure to the underlying equity. The zero-coupon bond provides the note buyer with principal protection. A zero-coupon bond allows for principal protection because it moves from its discount value to its par value over a specified period of

time without the periodic payment of interest. The discount from the par value of the zero-coupon bond can be used to purchase the call option on the underlying equity.

Dividend Reinvestment Plans/Programs

3.44 Dividend reinvestment plans/programs (DRIPs) and direct investment plans enable shareholders to reinvest variable amounts in a corporation. DRIPs are offered by corporations and allow investors to reinvest their dividends by purchasing additional shares or fractions of shares from the corporation on the dividend payment date.

Participation Certificates

3.45 Participation certificates grant their holders participation rights. Participation rights may take various forms, both for equity securities and for debt securities. In many countries, almost no legal restrictions are placed on this type of financial instrument.

3.46 Depending on their specific features, participation certificates are considered to be either equity securities or debt securities. They are treated as equity securities if the following criteria are met:

- The holder’s claims are subordinated.
- The holder’s remuneration is performance related.
- Capital is provided for an unlimited period, or at least on a long-term basis.

In light of these criteria, most participation certificates are considered to be equity securities.

3.47 “Genußscheine” (or “Genußrechte”) are a type of participation certificate. These are issued mainly in European countries such as Germany, Austria, and Switzerland. “Genußscheine” sometimes have a stated maturity.

Private Equity

3.48 Private equity is corporate equity (such as venture capital) that is not traded publicly on a stock exchange. Private equity is classified as either unlisted shares (F512) or other equity (F519).

Development Capital Certificates

3.49 Development capital certificates (“certificados de capital de desarrollo” or “CCDs”) are securities issued by trusts in order to channel investment resources to

equity securities relating to sectors and activities with the potential for long-term growth. The yield for these instruments depends on the results of each project. Neither interest nor the repayment of principal is guaranteed.

3.50 CCDs have a defined settlement period. Once the deadline has been reached, the issuing trust administrator must liquidate all of the assets and distribute the proceeds among investors.

3.51 CCDs give their holders the right to collect dividends and participate in capital reductions and share redemptions, as well as the right to sell or otherwise dispose of shares.

3.52 CCDs are similar to financial instruments issued by special-purpose acquisition companies (SPAC) in the United States, income trusts in Canada, and infrastructure funds in Australia.

Shares in Cooperative Entities and Credit Unions

3.53 Shares in cooperative entities are usually non-negotiable financial instruments and should be classified as “other equity.” However, there may also be situations where credit unions issue equity certificates, which are classified as listed or unlisted shares.

3.54 If the holder of shares in a cooperative entity has the right to request redemption without restrictions, the shares should be classified as equity securities. However, they should be classified as “other equity” if:

- The entity has an unconditional right to refuse redemption.
- Local legislation, regulations, or the entity’s statute limits redemption.

3.55 Credit unions are cooperative financial institutions owned and operated by their customer-owners; the shareholders constitute both customers and owners of the credit union. Each customer-owner has one vote at the annual general meeting. A voluntary board of directors is nominated and elected by the shareholders.

3.56 Ownership is usually open to any resident organization or corporation and is based on a common share account. Shares are refundable on cancellation of ownership. They also carry the right to dividends, which may be based on the credit union’s earnings and are determined by the board of directors.

3.57 Members of a credit union can hold their savings in either deposit or share accounts. Accordingly, as a rule, shares in credit unions should be treated as deposits, or as “other equity” if they are not redeemable immediately or on short notice.

Other Financial Instruments Not Classified as Securities

Investment Fund Shares or Units

3.58 Investment funds are collective investment undertakings through which investors pool funds in order to acquire financial or nonfinancial assets. Shares or units in these funds (F52) may be categorized, depending on the variability of the capital base, as open-ended or closed-ended investment fund shares or units.

- Open-ended investment funds can issue and redeem shares on a continuous basis or at certain predefined (short-term) intervals. The most popular types of open-ended investment fund are index funds and money market funds (MMFs). Index funds track the performance of particular stock or bond indices.⁵ MMFs invest in short-term, low-risk financial instruments. An open-ended investment fund is divided equally into shares or units, which vary in price in direct proportion to the variation in the fund’s net asset value (NAV).⁶
- Closed-ended investment funds issue a limited number of shares or units. These sometimes have a specified maturity, such as five to seven years. New shares or units are rarely issued once the fund has been launched, and shares or units are not usually redeemable until the fund is liquidated.

3.59 Open-ended investment fund shares or units are not usually negotiable and are not, therefore, equity securities. However, closed-ended investment fund shares or units are typically negotiable and therefore constitute equity securities. Open-ended investment fund shares or units are not covered in the *Handbook*.

⁵ Exchange-traded funds are a subset of index funds that can be traded on an exchange during the day, just like common stocks.

⁶ The classification of financial instruments (CFI) standard defines open-ended funds as those that “permanently sell new units to the public and redeem outstanding units on demand, resulting in an increase or decrease of outstanding capital.”

Other Equity

3.60 Other equity (F519) is equity that is not in the form of securities.⁷ Other equity includes equity in quasi-corporations (such as branches, trusts, and partnerships), as well as notional units representing ownership of real estate.

3.61 Equity of partners with unlimited liability in incorporated partnerships is classified as other equity.

3.62 Participation in (i.e., ownership of) many international organizations is not in the form of shares and therefore is classified as other equity. However, equity in the Bank for International Settlements (BIS) does take the form of (unlisted) shares (*BPM6*, paragraph 5.26).

3.63 The financial instruments listed below are also typically regarded as other equity.

- All equity in corporations that is not in the form of shares:
 - Equity in incorporated partnerships that is subscribed by unlimited partners
 - Equity in limited liability companies whose owners are partners and not shareholders
 - Capital invested in ordinary or limited partnerships recognized as independent legal entities
 - Capital invested in cooperative societies recognized as independent legal entities.
- Investment by general government in the capital of public corporations whose capital is not divided into shares and that are recognized as independent legal entities under special legislation.
- Investment by general government and nongovernment units in the capital of the central bank.⁸
- Investment by general government and central banks in the capital of international and supranational organizations (with the exception of the IMF), even if these are legally constituted financial resources of a currency union central bank (CUCB) (e.g., the European Central Bank) contributed by national central banks.

⁷With security-by-security (SBS) databases, it may be that financial instruments are reported using the International Securities Identification Number (ISIN) code for other equity (F519). These should be classified as unlisted shares (F512).

⁸From a legal perspective, central banks may resemble corporations issuing shares, but central bank equity is treated as other equity (AF519) by convention.

- Capital invested in financial and nonfinancial quasi-corporations (corresponding to new investment—whether in cash or in kind—minus any capital withdrawals).
- Any financial claims of nonresident units against notional resident units, and vice versa.

Shares Offered for Sale

3.64 Equity securities offered for sale, but not taken up on issue, are not recorded.

Loan Stocks

3.65 Loan stocks are classified as loans. Loan stocks are loans secured using ordinary or preferred shares as collateral. The loan will earn a fixed rate of interest, much like a standard loan.

3.66 Secured loan stocks are called “convertible loan stocks” if they can be converted directly into shares, subject to specific conditions being met, with a predetermined conversion rate, as with irredeemable convertible secured loan stocks.

Warrants

3.67 Warrants are options and should be classified as financial derivatives.⁹ Warrants are tradable financial instruments giving the holder the right to buy or sell, subject to specific conditions and for a specified period of time, a certain number of shares or debt securities from or to the issuer of the warrant (usually a corporation; *2008 SNA*, paragraph 11.119). The instruments described below are all classified as warrants:

- Call or put warrants are issued on the basis of an underlying financial instrument or an index.
- Basket warrants are issued as call or put warrants based on a basket of two or more underlying shares.
- Bull equity-linked instruments give investors the right to buy the underlying shares at a discounted rate vis-à-vis the underlying share price at the time of issuance. If the underlying share price exceeds the exercise price, investors are entitled to a cash settlement on expiration of the warrant (i.e., the par value of the instrument plus interest).

⁹Listed financial derivatives, such as warrants, are sometimes considered to be securities (*BPM6*, paragraph 5.15).

- Bear equity-linked instruments essentially function in the opposite way to bull instruments. If the prevailing price of the underlying share (the closing price) is below the exercise price, investors receive the par value of the instrument plus interest as a cash settlement.
- Range equity-linked securities give the investor the par value plus interest where the prevailing price of the underlying share is within a range demarcated by two exercise prices.
- Callable bull or bear certificates track the performance of an underlying stock without requiring investors to pay the full price required in order to own the actual stock.

Stock Options

3.68 A stock option (or “share option”) represents a contract sold by one party to another that entitles (but does not oblige) the buyer to buy (call) or sell (put) a stock at an agreed price within a certain period or on a specific date. Stock options are financial derivatives and are not, therefore, classified as securities.

3.69 Employee stock options are agreements under which employees have the right to purchase a given number of shares in their employer’s firm at a stated price, either on a specified date (the “vesting” date) or within a specific period of time immediately following the vesting date.



4

Institutional Units and Sectors

4.1 Chapter 4 outlines the concepts of institutional unit and residence, and explains the allocation of institutional units to sectors and subsectors. It expands on matters that are relevant for the presentation of securities statistics by sector and subsector and considers some borderline cases.

Definition of an Institutional Unit

4.2 Institutional units are economic entities capable of owning goods and assets, incurring liabilities, and engaging in economic activities and transactions with other units in their own right. Two main types of unit qualify as institutional units, namely persons or groups of persons (households), and legal or social entities.

Definition of Residence

4.3 The residence of each institutional unit is the economic territory with which it has the strongest connection. This is expressed as the “center of predominant economic interest” (*BPM6*, paragraph 4.113). As a general principle, an enterprise is resident in an economic territory when that enterprise engages in the production of a significant amount of goods and/or services from a location in that territory. In the absence of any significant physical dimension to an enterprise, its residence is determined by the economic territory under whose laws the enterprise is incorporated or registered (*2008 SNA*, paragraphs 4.10 to 4.15).

4.4 The center of predominant economic interest of an institutional unit is the economic territory where it engages and intends to continue engaging in economic activities and transactions on a significant scale for one year or more (*BPM6*, paragraph 4.114). The most commonly used concept of economic territory is the area under the effective economic control of a single government. However, an economic territory may be larger or smaller than this, as in a currency or

economic union or a part of a country or the world (*2008 SNA*, paragraph 4.10).

4.5 An institutional unit is a resident of one economic territory only, determined by its center of predominant economic interest (*BPM6*, paragraph 4.113). The connection of an institutional unit to a particular economic territory is determined by aspects such as its physical location and being subject to the jurisdiction of the government of the territory. Corporations are considered to have their center of predominant economic interest in the economy where they are legally constituted and registered. In some instances, a corporation may have little or no physical presence (*BPM6*, paragraph 4.134). Beyond this general definition, certain special cases merit consideration (*BPM6*, paragraphs 4.131-4.137).

International and Regional Organizations

4.6 International and regional organizations are not considered resident of the territories in which they are located or conduct their affairs (*BPM6*, paragraph 4.105). International organizations, such as international financial institutions, should be classified as nonresident in all national statistics. Some international organizations cover a group of economies in a particular region, such as with economic or currency unions. Such regional organizations are classified as resident of the region formed by the member national economies, and not as resident of any member national economy (*BPM6*, paragraph 4.142).

Offshore Enterprises

4.7 Some countries create separate physical or legal zones that are under their control and that enjoy certain legal, tax, and/or other regulatory benefits (*BPM6*, paragraph 4.8). Offshore banks have low or no taxation and are exempt from the regulations that usually apply to onshore institutions, such as reserve

requirements or foreign exchange restrictions. These financial corporations mostly serve nonresidents and/or conduct financial intermediation between residents and nonresidents (*MFSCG*, paragraph 3.90). Offshore institutional units are residents of the economy where they are incorporated or registered.

Multiterritory Enterprises

4.8 Multiterritory enterprises are single enterprises that run seamless operations over more than one economic territory, but for which branches cannot be identified as being attributable to a single economic territory (*BPM6*, paragraph 4.41). Typical cases are enterprises with cross-border operations such as hydroelectric projects on border rivers, pipelines, bridges, or tunnels that cross borders.

4.9 In the case of multiterritory enterprises, the *BPM6* recommends identifying separate institutional units for each economy. However, if this is not feasible because separate accounts cannot be developed, it is then necessary to prorate the total operations of the enterprise between the individual economic territories. The *BPM6* mentions a range of possible factors to be taken into account in the proration, including equity holdings, equal splits, splits based on operational factors such as tonnages or wages, and any prorating formula used for taxation (*BPM6*, paragraph 4.43).

Allocation of Institutional Units to Sectors and Subsectors

4.10 Institutional units are grouped in five mutually exclusive institutional sectors on the basis of their principal functions, behavior, and objectives: (1) nonfinancial corporations; (2) financial corporations; (3) general government; (4) households; and (5) nonprofit institutions serving households (NPISHs). Together, the five sectors make up the total (national) economy. (See also Table 4.1.)

4.11 The rest of the world sector covers transactions, other flows, and positions between resident sectors and nonresident institutional units.

Nonfinancial Corporations

4.12 The nonfinancial corporations sector comprises resident corporations (and nonprofit institutions) whose principal activity is the production of market goods and nonfinancial services (*2008 SNA*,

paragraph 4.94). Some nonfinancial corporations may have secondary financial activities, such as producers or retailers of goods that provide consumer credit directly to their customers. Such corporations are classified as nonfinancial corporations, provided their main activity is the production of goods and nonfinancial services (*2008 SNA*, paragraph 4.95).

4.13 The nonfinancial corporations sector can be divided, on the basis of the types of institutional unit exercising control over them, into public nonfinancial corporations, national private nonfinancial corporations and foreign controlled nonfinancial corporations (*2008 SNA*, paragraph 4.96).

Financial Corporations

4.14 The financial corporations sector consists of all resident corporations principally engaged in providing financial services to other institutional units. The production of financial services takes the form of financial intermediation, financial risk management, liquidity transformation, or auxiliary financial activities (*2008 SNA*, paragraph 4.98). The financial corporations sector can be divided into nine subsectors according to their activity in the market and the type and liquidity of their liabilities.

Central bank

4.15 The central bank is the national financial institution that exercises control over key aspects of the financial system. This subsector comprises: the national central bank, including where it is part of a system of central banks; currency boards or independent currency authorities that issue domestic currency fully backed by foreign exchange reserves; and central monetary agencies of essentially public origin (for example, agencies managing foreign exchange or issuing banknotes or coins) that keep a complete set of accounts but are not classified as part of central government (*2008 SNA*, paragraph 4.104).

4.16 A currency union comprises two or more economies that have a regional central decision-making body, usually a currency union central bank (CUCB) with the authority to issue the legal tender of the area and conduct a single monetary policy (*BPM6*, paragraph A3.9). There are currently two kinds of currency union. A centralized currency union model has a CUCB owned by the governments of the mem-

Table 4.1 Institutional Sectors and Subsectors According to the 2008 SNA

Sectors and subsectors			2008 SNA codes			
				Public	National private	Foreign-controlled
Nonfinancial corporations			S11	S11001	S11002	S11003
Financial corporations			S12			
Money-issuing institutions	Central bank		S121			
	Other money-issuing institutions	Deposit-taking corporations except the central bank	S122	S12201	S12202	S12203
		Money market funds (MMF)*	S123	S12301	S12302	S12303
Financial corporations other than money-issuing institutions, insurance corporations and pension funds	Non-MMF investment funds		S124	S12401	S12402	S12403
	Other financial intermediaries, except insurance corporations and pension funds		S125	S12501	S12502	S12503
	Financial auxiliaries		S126	S12601	S12602	S12603
	Captive financial institutions and money lenders		S127	S12701	S12702	S12703
Insurance corporations and pension funds	Insurance corporations		S128	S12801	S12802	S12803
	Pension funds		S129	S12901	S12902	S12903
General government			S13			
Central government (excluding social security funds)			S1311			
State government (excluding social security funds)			S1312			
Local government (excluding social security funds)			S1313			
Social security funds			S1314			
Households			S14			
Nonprofit institutions serving households			S15			
Rest of the world			S2			

*MMFs may or may not be classified as money-issuing institutions, depending on the definition of broad money in a given country or economic area.

ber countries, and the central bank operations in each member country are carried out by branches or agencies of the regional central bank. A decentralized currency union model comprises a CUCB and national central banks that own the CUCB and act as the central bank for the countries where they are located.¹

¹ Examples of CUCBs in the centralized model are the Central Bank of West African States (BCEAO), the Bank of Central African States (BEAC) and the Eastern Caribbean Central Bank (ECCB). The euro area with the European Central Bank (ECB) is an example of the decentralized model.

4.17 A CUCB is an international or supranational financial institution that acts as a common central bank for member countries of a currency union. The CUCB is an institutional unit in its own right (*BPM6*, paragraph A3.11). If the currency union is structured such that the CUCB has headquarters in one country and national offices in each member country, its headquarters are considered to be a separate unit resident in the region as a whole and not in any member economy. National offices of the CUCB, which act as the central bank for those countries, are treated as a resident of the country where they are located.

Deposit-taking corporations except the central bank

4.18 Deposit-taking corporations, except the central bank, have financial intermediation as their principal activity. They incur liabilities in the form of deposits or financial instruments that are close substitutes for deposits (*2008 SNA*, paragraph 4.105).

4.19 In general, this subsector comprises commercial banks, universal banks, all-purpose banks, savings banks (including trustee savings banks and savings and loan associations), post office giro institutions, post banks, giro banks, rural credit banks, agricultural credit banks, cooperative credit banks, credit unions, and specialized banks or other financial corporations if they take deposits or issue liabilities included in the national definition of broad money (*2008 SNA*, paragraph 4.106).

Money market funds

4.20 Money market funds (MMF) are collective investment schemes that raise funds by issuing shares or units to the public. The proceeds are invested mainly in money market instruments, other MMF shares or units, transferable debt instruments with a residual maturity of not more than one year, bank deposits, and instruments that provide a rate of return close to the interest rates of money market instruments. MMF shares or units are often transferable by check or other means of direct third-party payment. Because of the nature of the instruments in which the schemes invest, their shares or units may be regarded as close substitutes for deposits (*2008 SNA*, paragraph 4.107).

Non-MMF investment funds

4.21 Non-MMF investment funds are collective investment schemes that raise funds by issuing shares or units to the public. The proceeds are invested primarily in financial assets, other than short-term assets, or in non-financial assets, such as real estate (or both). Non-MMF investment fund shares or units are generally not close substitutes for deposits (*2008 SNA*, paragraph 4.108).

Other financial intermediaries except insurance corporations and pension funds

4.22 Other financial intermediaries except insurance corporations and pension funds consist of financial corporations that are engaged in providing financial

services by incurring liabilities in forms other than currency, deposits or close substitutes of deposits, on their own account for the purpose of acquiring financial assets by engaging in financial transactions on the market (*2008 SNA*, paragraph 4.109).

4.23 Units classified in this subsector include financial corporations that specialize in the securitization of assets. In Chapter 6, these institutional units are referred to as securitization corporations.

4.24 Also classified in the other financial intermediaries subsector are: security and derivative dealers (operating on their own account); financial corporations engaged in lending (including separately incorporated finance subsidiaries or associates of retailers) that may undertake financial leasing and personal or commercial finance; central clearing counterparties; and specialized financial corporations as listed in the *2008 SNA*, paragraph 4.110 (e).

Financial auxiliaries

4.25 Financial auxiliaries are financial corporations principally engaged in activities closely related to financial intermediation but that do not act as intermediaries (*2008 SNA*, paragraph 4.111). Units in this subsector do not raise funds or extend credit on their own account.

4.26 The most common types of financial auxiliary are: insurance brokers and agents; loan and securities brokers; investment advisers; flotation corporations; corporations that arrange derivative and hedging instruments without issuing them; corporations providing infrastructure for financial markets; managers of pension funds and mutual funds; stock and insurance exchanges; foreign exchange bureaus; nonprofit institutions serving financial corporations; head offices of financial corporations that are principally engaged in controlling financial corporations; and central supervisory authorities of financial intermediaries and financial markets when they are separate institutional units (*2008 SNA*, paragraph 4.112).

Captive financial institutions and money lenders

4.27 Captive financial institutions and money lenders consist of institutional units providing financial services, where most of either their assets or liabilities are

not transacted on open financial markets (*2008 SNA*, paragraph 4.113). The subsector includes: units that are legal entities such as trusts or brass plate companies; holding corporations that hold only the assets of a group of subsidiary corporations and whose principal activity is owning the group without any other service to the enterprises in which the equity is held; special purpose entities (SPEs) or conduits;² money lenders, pawnshops, etc. (*2008 SNA*, paragraph 4.114).

4.28 Resident captive financial institutions, such as trusts, brass plate companies, holding companies, SPEs, and conduits are simply passive holders of assets and liabilities and are always related to another corporation, often as a subsidiary. They are not treated as separate institutional units but as integral parts of the parent corporation, as they cannot act independently (*2008 SNA*, paragraphs 4.53 to 4.66). Captive financial institutions set up outside the country where the parent corporation resides are treated as separate units and resident of the economic territory where they are incorporated or registered (*BPM6*, paragraph 4.52). SPEs set up by general government with characteristics and functions similar to captive financial institutions are also treated as an integral part of general government if they are resident, but as separate institutional units if they are nonresident.

Insurance corporations

4.29 Insurance corporations consist of incorporated, mutual, and other entities whose principal function is to provide life, accident, sickness, fire, or other forms of insurance to individual institutional units or groups of units, or reinsurance services to other insurance corporations. Captive insurance, that is, an insurance corporation that serves only its owners, is included in this subsector. Also included are deposit insurers, issuers of deposit guarantees, and other issuers of standardized guarantees (*2008 SNA*, paragraph 4.115).

Pension funds

4.30 Pension funds are set up to provide retirement benefits for specific groups of employees and self-employed persons. Governments sometimes organize pension schemes for their employees that are inde-

pendent of the social security system. The pension fund subsector consists of only those social insurance pension schemes that are institutional units separate from the units that create them (*2008 SNA*, paragraph 4.116). Excluded from this subsector are nonautonomous pension schemes managed by employers, government-sponsored pension schemes funded through wage taxes (pay-as-you-go schemes), and arrangements organized by nongovernment employers where the fund reserves are simply included in the employer's own reserves or are invested in securities issued by the employer (*BPM6*, paragraph 4.90).

General Government

4.31 Government units are unique kinds of legal entities established by political processes that exercise legislative, judicial, or executive authority over other institutional units within a given area (*2008 SNA*, paragraph 4.117). There may be different levels of government within a single territory.

4.32 Two methods for delineating the subsectors of general government are distinguished. First, the general government sector can be divided into central government, state government, local government, and social security funds (*2008 SNA*, paragraph 4.129). Alternatively, social security funds may be allocated to other general government subsectors (central, state, and local) in accordance with the level of government at which they operate (*2008 SNA*, paragraph 4.130). The choice between the two methods depends mainly on the size, and importance, of social security funds within a country and on the way they are managed (*2008 SNA*, paragraph 4.132).

Central government

4.33 The political authority of central government extends over the entire territory of the country. The central government has the authority to impose taxes on all resident and nonresident units engaged in economic activities within the country. It is responsible for providing collective services for the benefit of the community as a whole. Its political responsibilities include national defense, relations with other countries, and the maintenance of law and order. It also seeks to ensure the efficient operation of the social and economic system of the country. In addition, it may incur expenses on the provision of services primarily for the benefit of individual households, such

²This subsector excludes institutional units involved in the securitization of assets, or securitization corporations, that are classified as other financial intermediaries.

as education or health, and it may make transfers to other institutional units, including other levels of government (2008 SNA, paragraph 4.135).

4.34 The central government may include units that engage in financial transactions that in other countries would be performed by central banks or other deposit-taking corporations. When financially integrated into the central government and under its direct control and supervision, these monetary authority functions are recorded as part of the central government sector, rather than in the financial sector (2008 SNA, paragraph 4.139).

State government

4.35 A state, province, or region is the largest geographical area into which the country as a whole may be divided for political or administrative purposes (2008 SNA, paragraph 4.141). A state government usually has the fiscal authority to levy taxes on institutional units that are resident in or engage in economic activities in its area of competence. A state government may receive transfers from the central government, but it must be able to appoint its own officers independently of external administrative control and have spending autonomy. If a regional unit is entirely dependent on funds from the central government, and if the central government controls the ways in which those funds are to be spent at the regional level, it should be treated as a central government agency (2008 SNA, paragraph 4.142).

Local government

4.36 Local government units are institutional units whose fiscal, legislative, and executive authority extends over the smallest geographical areas distinguished for administrative and political purposes. The same rules with regard to administrative authority, stated previously, that determine whether state governments should be considered as a separate institutional unit or a central government agency should also apply to local governments in their relations with the central and state governments (2008 SNA, paragraph 4.145).

Social security funds

4.37 Social security funds are institutional units operating social security schemes, that is, social insurance schemes that cover the community as a whole or large

sections of it and are imposed and controlled by government units. The schemes cover a wide variety of programs, providing benefits in cash or in kind for old age, invalidity or death, survivors, sickness and maternity, work injury, unemployment, family allowance, and health care, among others (2008 SNA, paragraph 4.124). The social security funds subsector consists of the social security funds operating at all levels of government (2008 SNA, paragraph 4.147).

Households

4.38 A household is a group of persons who share the same living accommodations, pool some or all of their income and wealth, and consume certain types of goods and services collectively, mainly housing and food (2008 SNA, paragraph 4.149). An unincorporated enterprise can only be treated as a corporation if it is possible to separate all assets into those that belong to the household in its capacity as a consumer, from those belonging to the household in its capacity as a producer (2008 SNA, paragraph 4.157).

Nonprofit Institutions Serving Households

4.39 NPISHs provide goods and services to households free of charge or at prices that are not economically significant.³ NPISHs consist mainly of associations such as: trade unions; professional or learned societies; consumers' associations; political parties (except in single-party states where the political party is included in general government); churches and religious societies (including those financed by government); social, cultural, and recreational sports clubs; and organizations that provide goods and services for philanthropic purposes rather than for the units that control them (2008 SNA, paragraphs 4.166 and 4.167).

Special Cases

Public-private partnerships

4.40 Public-private partnerships (PPPs) are arrangements used by governments in partnership with the private sector to finance the construction and operation of fixed assets (roads, bridges, tunnels, etc.). PPPs can take numerous different forms and names, such as

³ Nonprofit institutions are allocated to the nonfinancial corporations sector where they are engaged in market production and to the general government sector where they are engaged in nonmarket production but are subject to government control.

private finance initiatives (PFIs), build-operate-transfer (BOT) schemes, and build-own-operate-transfer (BOOT) schemes, among others.⁴ For example, under a BOT scheme, a private corporation finances, designs, constructs, and operates a facility for a specified period of time. At the end of the contract, ownership of the asset is transferred to the government (2008 SNA, paragraphs 22.157 to 22.163).

4.41 Because of the complex sharing arrangements with regard to the risks and returns of the assets that may be stipulated in the contracts, the economic owner of the fixed assets is often unclear and a question may arise as to whether the PPP is a private corporation or a general government unit. Of relevance to the question of the sectoral allocation of securities issued by the PPP is the nature of the economic relationship between the government and the private corporation, which should be carefully analyzed beyond the contractual arrangements. Although it is not possible to prescribe a uniform treatment for the sectoral allocation of all PPP, important factors to be considered include who bears most of the construction, availability, demand, and obsolescence risks, and the degree of government control over the project design and over the services provided (2008 SNA, paragraph 22.159).

Public sector

4.42 The public sector⁵ consists of all institutional units of the general government sector plus all public corporations. Public corporations comprise public nonfinancial corporations, public financial corporations other than the central bank, and the central bank (2008 SNA, paragraph 22.41).⁶

4.43 To be classified as a public corporation, an institutional unit must be controlled by a government unit, another public corporation, or some combination of them, and sell most of its output at economically significant prices (2008 SNA, paragraphs 22.27 and 22.28). The government may secure control over a corporation by owning a majority of shares or otherwise controlling more than half of the voting power; or through special legislation empowering the government to determine corporate policy or to appoint the directors (2008 SNA, paragraph 4.80).

The rest of the world

4.44 The role played by the rest of the world sector in the accounting structure is similar to that of an institutional sector comprising all nonresident institutional units. Flows and positions between institutional units in the rest of the world are not presented.

4.45 To show positions and flows between nonresidents and residents, the rest of the world sector may be broken down by country or into groups of countries (although the countries chosen for analysis and the composition of such groups of countries may change over time, depending on their relative importance for the national economy).

4.46 Nonresidents may also be broken down by institutional sector or—in the case of financial corporations—subsector. If analytically useful, specific countries or groups of countries can be broken down further by sector or subsector.

⁴ There is a wide spectrum of schemes similar to BOT and BOOT schemes, such as build-transfer, build-own-operate, build-lease-transfer, build-transfer-operate, contract-add-operate, design-build-finance-operate, develop-operate-transfer, rehabilitate-operate-transfer, and rehabilitate-own-operate schemes.

⁵ The public sector is not a separate institutional sector like the five sectors described in this chapter, but a grouping of sectors and subsectors used in analysis.

⁶ See also *GFSM 2014* and the *Public Sector Debt Statistics Guide*.



5

Positions, Flows, and Accounting Rules

5.1 The presentation tables outlined in this *Handbook* cover positions and flows. Chapter 5 provides the methodological framework for these data in terms of accounting rules and valuation principles.

5.2 The *Handbook* also explains the treatment of accrued interest for debt securities. See also Annex 1.

Quadruple-entry Accounting and Time of Recording

5.3 For an appropriate valuation of securities and the recording of accrued interest by issuers and holders of debt securities, securities transactions must be recorded on the basis of the quadruple-entry principle; the approach used to ensure consistency across accounts and sectors in international statistical standards (2008 SNA, paragraph 2.52). One implication of the quadruple-entry principle is that securities transactions, and other flows, are recorded at the same point in time or period of time in the various accounts for both units involved (2008 SNA, paragraph 2.54).

5.4 Following the principle of quadruple-entry accounting as applied in the 2008 SNA, the acquisition, disposal, issuance, and redemption of a security should result in the recording of four entries—two for each institutional unit involved in the transaction. These are either: (1) the holder and the issuer of the financial instrument; or (2) the two holders (i.e., the “new” holder receiving the securities and the “old” holder delivering them).

5.5 For example, an equity security is issued by a nonfinancial corporation (the issuer) and acquired by a household (the holder) in exchange for currency or transferable deposits. In the financial account of the nonfinancial corporation, an increase in liabilities (equity securities) and an increase in assets (currency or transferable deposits) are recorded. In

the financial account of the household, an increase in one financial asset (equity securities) is offset by a decrease in another financial asset (currency or transferable deposits), with no change in liabilities recorded.

5.6 If a debt security held by a household is sold to a financial corporation, an increase in assets (currency or transferable deposits) and a decrease in assets (debt securities) are recorded in the financial account of the household. In the financial account of the financial corporation, an increase in one financial asset (debt securities) is offset by a decrease in another (currency or transferable deposits), or by an increase in liabilities (the financial corporation’s account vis-à-vis the household).

5.7 The quadruple-entry accounting rule implies that the balancing items net lending (+) / net borrowing (-) derived from the capital account and from the financial account of institutional sectors should be identical.

5.8 The general principle is that these transactions between institutional units should be recorded when claims and obligations arise, are transformed or are cancelled, that is, on an accrual basis (2008 SNA, paragraph 2.55).

5.9 In many cases there is a delay between the actual transaction and the corresponding payment or receipt. Therefore, national accounts usually record actual transactions on an accrual basis, not on a cash basis (2008 SNA, paragraph 2.56). These two different accounting approaches can result in transactions being recorded at different times.

Relationship between Positions and Flows

5.10 The international statistical standards record two basic types of data—positions and flows. Positions

refer to the level of assets and liabilities at any point in time, while flows refer to economic actions and effects of events within an accounting period (*BPM6*, paragraph 3.2). In general, economic flows are described as transactions if they record interactions between institutional units that occur by mutual agreement and involve an exchange of value (*2008 SNA*, paragraphs 3.51 and 3.53).

5.11 Other flows are either revaluations or other changes in volume. The relationship between flows and positions for debt securities is presented in the equations below.

5.12 “Positions” for issuance and holdings of debt or equity securities are outstanding amounts at a specific point in time. “Flows” are the difference between the positions recorded at two specific points in time and consist of transactions between institutional units, revaluations, and other changes in volume during the period in question.

5.13 The relationship between positions and flows for issuance and holdings of securities is:

$$Position_t - position_{t-1} = flows_t$$

$Position_t$ is the issuer’s or holder’s position in terms of securities at the end of accounting period t and $position_{t-1}$ is its position in terms of securities at the end of accounting period $t-1$.

5.14 $Flows_t$ indicates changes in positions between two specific points in time. It is the sum of all flows for securities, viewed as changes in financial assets or liabilities, during accounting period t . It comprises transactions, revaluations, and other changes in volume:

$$Flows_t = transactions_t + revaluations_t + other\ changes\ in\ volume_t$$

5.15 $Transactions_t$ refers to net issuance (i.e., issuance minus redemptions) or net acquisitions (i.e., gross acquisitions minus disposals) of securities during accounting period t .

5.16 They measure, as changes in liabilities, the difference between gross issuance and redemptions and, as changes in financial assets, the difference between gross acquisitions and disposals during accounting period t .

$$Transactions_t = net\ issuance_t = gross\ issuance_t - redemptions_t$$

or

$$net\ acquisitions_t = gross\ acquisitions_t - disposals_t^1$$

5.17 For debt securities, gross issuance and gross acquisitions cover accrued interest.

5.18 Not all economic flows are transactions. Other economic flows include revaluations and other changes in volume.

5.19 $Revaluations_t$ refers to changes in outstanding positions owing to changes in the price of securities during accounting period t . The revaluation of assets or liabilities stems from changes in their prices and/or changes in exchange rates.² In the *BPM6*, revaluations are broken down into those that are due to changes in exchange rates and those that are due to “other price changes” (*BPM6*, paragraph 3.20b).

5.20 $Other\ changes\ in\ volume_t$ refers to all changes in positions between the end of accounting period $t-1$ and the end of accounting period t that are due neither to transactions nor to revaluations (e.g., default).

Gross and Net Transactions

Gross Issuance, Redemptions, and Net Issuance of Securities

5.21 Gross recording of financial transactions in securities means that the incurrence and repayment of liabilities relating to debt and equity securities are shown separately as gross issuance and gross redemptions. Net recording means that the issuance of securities is shown net of redemptions.

5.22 Issuance relates to the situation where an issuer sells newly created debt or equity securities to holders. A security is considered to have been issued when the issuer transfers it to a holder, usually in exchange for currency or transferable deposits.

5.23 Redemptions of securities include all repurchases of the security. They are recorded as financial transactions that decrease the issuer’s liabilities (securities) and financial assets (currency or transferable deposits). They usually include all debt securities reaching their maturity date as well as early

¹Disposals do not cover write-offs. Write-offs must be treated as other changes in the volume of assets and liabilities, not as transactions.

²Changes in exchange rates apply only to holdings of securities denominated in foreign currencies.

redemptions.³ For the creditor, the composition of financial assets changes (a decrease in holdings of securities and an increase in holdings of currency or transferable deposits).

5.24 Net issuance of securities is calculated as issuance minus redemptions. $Transactions_t$ indicates net issuance during accounting period t .

Gross Acquisitions, Disposals, and Net Acquisitions of Securities

5.25 Gross acquisitions and disposals of securities are financial transactions. These are used to analyze securities market activity and income generation.

5.26 Acquisitions are either: (1) purchases of newly issued securities from an issuer; or (2) purchases of existing securities from another holder on the secondary market. A security is considered to have been acquired when claims and obligations arise, usually in exchange for currency or transferable deposits. Acquisitions of securities are financial transactions. Purchasing securities from the issuer increases both the holder's assets in securities and the issuer's liabilities in securities, while purchasing securities from another holder on the secondary market increases the new holder's assets in securities and decreases the old holder's assets in securities (with counterpart entries in currency or transferable deposits).

5.27 Disposals of securities are either: (1) the sale of securities to issuers; or (2) the sale of securities to new holders on the secondary market. A security is considered to have been disposed of when an obligation ceases to exist owing to redemption, or a claim is transferred by means of a sale on the secondary market, usually in exchange for currency or transferable deposits. Disposals of securities are financial transactions. Selling securities to the issuer decreases both the holder's assets in securities and the issuer's liabilities in securities, while selling securities to a new holder on the secondary market increases the new holder's assets in securities and decreases the old holder's assets in securities (with counterpart entries in currency or transferable deposits).⁴

5.28 Net acquisitions of securities are gross acquisitions minus disposals. $Transactions_t$ refers to net acquisitions during accounting period t .

Revaluations

5.29 Revaluations and holding gains or losses reflect changes in the price of securities. For the holder, price increases mean positive revaluations or holding gains, while price decreases mean negative revaluations or holding losses. Revaluations also include changes in the value of securities denominated in foreign currency owing to movements in the exchange rate.

5.30 When market interest rates change, the market value of fixed rate debt securities varies inversely with the interest rate movements. However, the closer the debt security is to maturity, the lower the impact of a given interest rate change on its price.

5.31 Revaluations are recorded as they accrue, whether they are realized or not.

5.32 Four different situations can be distinguished with regard to the calculation of revaluations (2008 SNA, paragraph 12.81).

- Where a security is held throughout the accounting period, the revaluation accruing during the accounting period is equal to the closing balance sheet value minus the opening balance sheet value, minus other changes in volume during the accounting period. These values are the estimated values of the assets if they were acquired at the times the balance sheets are drawn up. The revaluation (holding gain or loss) is unrealized.
- Where a security held at the beginning of the period is sold during the period, the revaluation accruing is equal to the value at disposal minus the opening balance sheet value, minus other changes in volume during the accounting period (i.e., prior to the sale). The revaluation (holding gain or loss) is realized.
- Where a security acquired during the period is still held at the end of the period, the revaluation accruing is equal to the closing balance sheet value minus the value at acquisition, minus other changes in volume during the accounting period (i.e., following the acquisition). The revaluation (holding gain or loss) is unrealized.
- Where a security is acquired and disposed of during the accounting period, the revaluation accruing is equal to the value at disposal minus the value at acquisition, minus other changes in volume during the accounting period

³There is no stated maturity for equity securities.

⁴It should be noted that there are two ways of dealing with a holder's own shareholdings, as described below in paragraphs 6.56-6.58.

(i.e., between its acquisition and disposal). The revaluation (holding gain or loss) is realized.

5.33 The calculation of revaluations in the last case requires the collection of actual transaction data. In addition, revaluations can only be calculated approximately in the second and third cases using derived transaction data.

Other Changes in the Volume of Assets and Liabilities

5.34 Other changes in the volume of securities as assets and liabilities comprise changes in quantity that are not due to transactions, and changes in classification.

Changes in the Quantity or Physical Characteristics of Securities

5.35 Changes in the quantity or physical characteristics of securities may arise as a result of:

- Accidental destruction owing to natural catastrophes or political events, or the destruction of evidence of ownership.
- Losses caused by events (such as fire, damage, or theft) that are not considered catastrophic.⁵
- Uncompensated seizures, where governments or other institutional units take possession of the assets of other institutional units (including non-resident units) without full compensation, for reasons other than the payment of taxes, fines, or similar levies.
- In the case of debt securities, changes in financial claims resulting from write-offs or unilateral debt repudiation. These are not financial transactions because there is no mutual agreement between the parties. Thus, a creditor may decide that a financial claim can no longer be collected, for example, because of the bankruptcy or liquidation of the debtor, and remove the claim from its balance sheet. The creditor's recognition that the claim is uncollectible is recorded as other changes in the volume of assets. The corresponding liability must also be removed from the balance sheet of the debtor to maintain balance in the accounts.⁶

⁵It is very rare for securities to be lost or accidentally destroyed, given that almost all securities are registered electronically.

⁶Changes in financial claims resulting from write-downs that reflect the actual market values of tradable financial claims should be accounted for in the revaluation account.

Changes in Sectoral Classification and Structure

5.36 Changes in terms of classification comprise changes to the sector to which an institutional unit is allocated, changes to the structure of institutional units, and changes in the classification of assets (2008 SNA, paragraphs 12.64 to 12.67).

- The legal status of an institutional unit may change (e.g., from a partnership to a corporation, and vice versa).
- Reclassifications involving the moving of institutional units from one sector to another or changes in the structure of institutional units give rise to the reallocation of assets. This may cause the appearance and disappearance of certain financial assets, which should be recorded as other changes in volume.
- When a corporation ceases to be an independent legal entity because one or more other corporations absorb it; all of that corporation's positions in terms of securities vis-à-vis the corporation(s) that absorbed it disappear. Its positions vis-à-vis third parties remain unchanged and pass to the corporation(s) absorbing it. Changes in prices owing to the absorption are recorded as revaluations.
- Similarly, when a corporation is legally split up into two or more institutional units, any new financial assets that may arise in the form of securities are recorded as other changes in volume.

5.37 Changes in the classification of assets, such as the conversion of debt securities into shares, are recorded as two financial transactions. Cancellations of debt securities by mutual agreement between the debtor and the creditor (debt cancellation or debt forgiveness) are recorded as transactions between the creditor and the debtor.

Valuation Principles

5.38 Issuance and holdings of securities should be recorded at market value, that is, at the midpoint between the buying and selling price where the securities are quoted on markets with a buy-sell spread (BPM6, paragraph 3.90).⁷ Positions are valued at

⁷This spread is a service provided by dealers and paid for by buyers and sellers.

the price at which the financial instrument could be bought in the market at the time the balance sheet is drawn up. Values observed in markets or estimated on the basis of observed market values should be used. Positions, transactions, and other flows of securities should be recorded using the same valuation principles for the accounts of all institutional units involved. However, ensuring consistent valuation on both sides of the balance sheet and the financial account is a challenging issue. For debt securities and listed shares in particular, the use of micro-data available in security-by-security (SBS) databases can help to address these measurement issues.

5.39 The presentation of issuance and holdings of securities at market value may be based on balance sheet data, but usually requires the availability of detailed information at the level of individual securities as contained in SBS databases.⁸

Valuation of Debt Securities

5.40 Market prices are the basic reference for valuation in the *2008 SNA*, paragraph 2.59. Accordingly, this *Handbook* recommends that debt securities be presented at market value and that liability positions also be expressed in nominal value, although not transactions.

5.41 It means that debt securities issues should be recorded at both market and nominal value. Both values provide useful information from the perspective of monetary policy, fiscal policy, and financial stability analysis.

5.42 Whereas debt securities issues should be recorded at both market and nominal value, debt securities holdings should be recorded at market value.

Market value

Transactions

5.43 Transactions in debt securities are valued at the actual price agreed upon by the institutional units involved in the transaction (*2008 SNA*, paragraph 2.59). Under normal circumstances, the market value is the price at which debt securities are

acquired or disposed of in transactions between willing parties, excluding commissions, fees, and taxes (*2008 SNA*, paragraph 3.122), but including accrued interest.

Positions

5.44 The market value of debt securities is the value at which they might be bought in markets at the time the valuation is required. It includes accrued interest. Ideally, values observed in markets or estimated from observed market values should be used (*2008 SNA*, paragraph 2.60).

The effect of coupon payments: dirty and clean prices

5.45 The dirty price of a debt security is the market price, including accrued interest due to coupon. The clean price does not include accrued interest due to coupon. Debt securities provide for coupon payments to be made to holders in accordance with a fixed schedule.⁹

5.46 The dirty price of a debt security will decrease when coupons are paid, with the result that its value will follow a sawtooth pattern. This is because there will be one less future cash flow (i.e., the coupon payment just received) at that point.

5.47 To separate out the effect of the coupon payments, the accrued interest between coupon dates is subtracted from the dirty price to arrive at the clean price. The calculation of accrued interest is based on the day count convention,¹⁰ the coupon, and the number of days since the preceding coupon payment date (the debtor approach).

5.48 Changes in the clean price reflect more closely changes in value attributable to issuer risk and changes in the market interest rates. Changes in the clean price follow a smoother pattern than changes in the dirty price. Use of the clean price also serves to distinguish interest accrued (based on the coupon) from revaluations (see the example described in Box 5.1).

⁸Data that are based on the balance sheets of equity securities' holders are affected by the accounting standards of the country where the holders reside and their implementation of those standards. This means that those positions do not usually reflect the securities' market value.

⁹With some exceptions, such as zero-coupon bonds.

¹⁰A day count convention (or a day count fraction) indicates how accrued interest is compiled between coupon dates. Different rules exist on how to determine the number of days of the 'accrual' period divided by the total number of days of the 'reference' period (often 360 or 365 days per year).

Box 5.1 Dirty and Clean Prices of Debt Securities

An example taken from Annex 1 of the *Handbook* can be used to illustrate the effect of coupon payments on dirty and clean prices. In this example, a five-year fixed interest rate bond of 1,000, repayable at maturity, is issued at par with annual fixed coupons of 100 during its life, which correspond to the market interest rate at the time of issuance (10 percent). The coupon is paid at the end of each year, accruing interest on a compound quarterly basis. It is assumed that changes in the market interest rate take place at the beginning of each year.

Because there is no change in the market interest rate during the first year, the only change in its market price is due to the accruing of interest. Therefore, the dirty price of the bond corresponds to its nominal value (face value plus interest accrued and not yet paid) and its clean price is equal to its face value (see paragraph 5.53). With changes in the market interest rate in the following years, the market price of the bond reflects not only the accrued coupon, but also valuation changes owing to changes in the discounted cash flow.

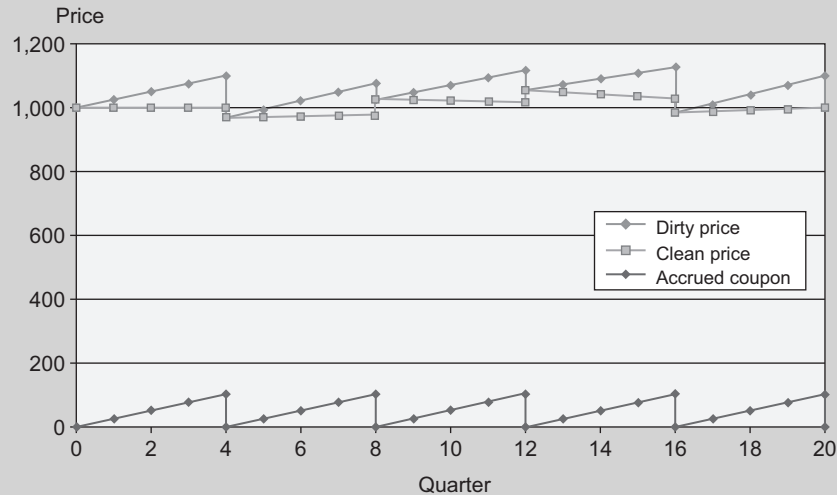
Table 5.1.1 shows the market value (dirty price) of the bond, the quarterly accrued interest due to coupon, and the market price without accrued interest (clean price). From this table, and the accompanying figure, it is possible to see how the use of clean prices results in a smoother path, compared with the sawtooth pattern of the dirty price approach.

Table 5.1.1 Dirty and Clean Prices of a Five-year Fixed Interest Rate Bond

Point in Time	Market value (dirty price)	Accrued Interest on coupon	Market value excluding accrued interest (clean price)
Beginning of quarter 1	1,000.0	0.0	1,000.0
End of quarter 1	1,024.1	24.1	1,000.0
End of quarter 2	1,048.8	48.8	1,000.0
End of quarter 3	1,074.1	74.1	1,000.0
Up to end of quarter 4	1,100.0	100.0	1,000.0
End of quarter 4 = Beginning of quarter 5	969.0	0.0	969.0
End of quarter 5	994.6	24.1	970.5
End of quarter 6	1,020.9	48.8	972.1
End of quarter 7	1,047.9	74.1	973.8
Up to end of quarter 8	1,075.6	100.0	975.6
End of quarter 8 = Beginning of quarter 9	1,025.3	0.0	1,025.3
End of quarter 9	1,047.6	24.1	1,023.5
End of quarter 10	1,070.5	48.8	1,021.6
End of quarter 11	1,093.8	74.1	1,019.7
Up to end of quarter 12	1,117.6	100.0	1,017.6
End of quarter 12 = Beginning of quarter 13	1,054.2	0.0	1,054.2
End of quarter 13	1,072.2	24.1	1,048.1
End of quarter 14	1,090.5	48.8	1,041.7
End of quarter 15	1,109.1	74.1	1,035.0
Up to end of quarter 16	1,128.0	100.0	1,028.0
End of quarter 16 = Beginning of quarter 17	982.1	0.0	982.1
End of quarter 17	1,010.4	24.1	986.3
End of quarter 18	1,039.4	48.8	990.6
End of quarter 19	1,069.3	74.1	995.2
Up to end of quarter 20	1,100.0	100.0	1,000.0
End of quarter 20	1,000.0	0.0	1,000.0

Box 5.1 Dirty and Clean Prices of Debt Securities (Continued)

Figure 5.1.1 Dirty and Clean Prices of a Five-year Fixed Interest Rate Bond



5.49 It is market practice to quote debt securities on a clean-price basis. When a debt security is traded or redeemed, the accrued interest is added to the value based on the clean price to reflect its market value, the dirty price.

5.50 Accordingly, many users prefer clean prices for analytical purposes. However, in the context of a system of institutional sector accounts and balance sheets analyzing detailed debtor/creditor relationships in terms of transactions, other flows and positions, the inclusion of accrued interest is appropriate.

Nominal value

5.51 The nominal value of a debt security refers to the outstanding amount the debtor owes to the creditor (2008 SNA, paragraph 3.157 (b)). It reflects the sum of funds originally advanced (the issue price), plus any subsequent advances, plus any accrued interest,¹¹ less any repayments. The nominal value in domestic currency of a debt security denominated

in foreign currency also includes revaluations arising from exchange rate changes (BPM6, paragraph 3.88 (b)).

5.52 Positions in debt securities holdings might also be valued at nominal value if such securities are designated as held-to-maturity securities. However, as positions, transactions and other flows should be recorded with the same value in the accounts of all the institutional units involved, debt securities as financial assets should be recorded at market value.

5.53 In practice, nominal value is often considered to be the same as face value. However, the two concepts are distinguished in the 2008 SNA. Face value is defined as the amount of principal to be repaid (2008 SNA, paragraph 3.157 (d)). It is equivalent to the redemption price of a debt security excluding accrued interest. The *Handbook* does not recommend the presentation of debt securities at face value. As stated previously, the *Handbook* recommends that debt securities be presented on a market value basis and that liability positions be expressed also in nominal value (although not transactions). (See paragraph 5.42.)

¹¹In the case of discount debt securities, accrued interest is determined by the discount that is distributed over the life of the securities.

Foreign exchange revaluations

5.54 Foreign exchange revaluations reflect changes in the value of securities denominated in foreign currencies attributable to exchange rate movements. They are recorded as revaluations, separately from other changes in the market price of the securities (see Box 5.2).

Interest Accrued on Debt Securities

5.55 Interest accrued on debt securities is the amount that the issuers of debt securities become liable to pay over a given period of time without reducing the principal outstanding (*2008 SNA*, paragraph 7.113). Interest accrued is income and also a financial transaction to the extent that the interest is accrued but not yet paid (as if the accrued interest were promptly reinvested in debt securities) (*BPM6*, paragraph 11.49). This transaction is reversed (giving rise to a redemption of debt securities) when the interest accrued is actually paid.¹²

The debtor approach and the creditor approach to recording accrued interest

5.56 There are two ways to define interest for debt securities, the debtor approach and the creditor approach (see Box 5.3).¹³

5.57 The debtor approach defines interest from the perspective of the issuer of debt securities, while the creditor approach defines interest from the perspective of the holder of debt securities.

5.58 International statistical standards apply the debtor approach when recording accrued interest. The *Handbook* also recommends following this approach by defining accrued interest as in paragraph 5.55.

5.59 Book value financial accounting and reporting follows the approach that debtors should report interest due and accrued on their outstanding debt. Asset holders use a net yield concept that comprises interest due and accrued, including or excluding the current

period amortization of the acquisition cost of the debt security asset(s). This means that across the institutional sectors of an economy, interest receivable and payable may be not equal.

5.60 Under the creditor approach, interest accrued reflects current market conditions and expectations. At any point in time, interest accrued is determined using the current yield to maturity (*BPM6*, paragraph 11.50 (a) and (b)).

Interest payable by type of debt security

Bills and similar debt securities

5.61 Interest on bills and similar debt securities is measured by the discount on the bill, that is, the difference between the sum paid to the holder of the bill when it matures and the amount received at the time of issue (*2008 SNA*, paragraph 17.264).

Bonds and debentures

5.62 For a bond issued at a discount or a premium, the difference between the redemption price and issue price constitutes interest that accrues period-by-period over the life of the bond, in the same way as for a bill (*2008 SNA*, paragraph 17.269).

Zero-coupon bonds

5.63 Zero-coupon bonds do not entitle their holders to any payment during the life of the security, but only to receive a stated fixed sum as repayment of principal on a specified date or dates. When zero-coupon bonds are issued, they are sold at a price that is lower than the price at which they are redeemed at maturity, reflecting the interest cost over the lifetime of the bond. The difference between the redemption value and issue price of a zero-coupon bond represents interest accruing continuously over the life of the security until its maturity (*2008 SNA*, paragraphs 17.270 and 17.271).

Index-linked debt securities

5.64 In line with the *BPM6*, the *Handbook* recommends classifying all index-linked debt securities (except those linked to a foreign currency) as variable interest rate debt securities. A debt security is classified as a variable interest rate security if the indexation applies to the principal, or coupons, or both (*BPM6*, paragraph 5.113).

¹²For example, a fixed interest rate bond is issued at 100 and pays annual fixed coupons of 10 during its life. Interest accrues of 10, even though no coupon is actually paid. The interest is considered to be reinvested in the bond—increasing its nominal value from 100 to 110. The coupon paid by the debtor at the end of each year is a (partial) redemption of the bond, reducing its nominal value from 110 to 100.

¹³The approaches are also characterized on a “historical/contractual” basis and on a “prevailing market rate” basis.

Box 5.2 Aggregation of Securities Denominated in Various Currencies—Positions and Flows

The compilation of global aggregates requires a method for converting securities denominated in various currencies into one common currency.

Securities positions and flows (transactions, revaluations, and other changes in the volume of assets) are aggregated in different ways. While positions are measured at a given point in time, flows are measured over a period. However, there is a relationship between positions and flows according to the equation $Position_t - position_{t-1} = flows_t$.

The example presented in Table 5.2.1 describes the aggregation of securities denominated in different domestic currencies.

Table 5.2.1 Aggregation of Securities Denominated in Various Currencies

Item	Position at $t - 1$	Position at t	Change in positions		Aggregation effect owing to different methods for converting changes in positions into currency C
			Revaluation by converting, first, the positions denominated in currency A and B into positions denominated in currency C and then deriving the changes in positions	Revaluation by deriving, first, the changes in positions denominated in currency A and B and then converting the changes in positions into currency C	
Security x denominated in currency A	150.00	100.00		-50.00	
Security y denominated in currency B	60.00	80.00		20.00	
Exchange rate A/C	1.20	1.50		1.35	
Exchange rate B/C	2.30	2.10		2.20	
Security x denominated in currency C	125.00	66.67	-59.33	-37.04	21.30
Security y denominated in currency C	26.09	39.10	12.01	9.09	2.92
Total	151.09	104.76	-46.33	-27.95	19.38

Table 5.2.1 shows that the change in positions can be compiled in two ways when positions and flows of securities denominated in various currencies are converted into a common currency. Either: (1) the positions in currency A and in currency B are converted into currency C and the changes in positions are derived afterwards (-46.33 in the table represents an estimate of the revaluation); or (2) the changes in positions are compiled first in terms of currencies A and B and then converted into currency C (-27.95 in the table represents an estimate of the revaluation).

The changes in positions compiled according to these two methods are not the same; the size of the difference (interpreted as an aggregation effect) depends on the volatility of the exchange rates involved. As a convention, the *Handbook* recommends the first method of aggregating positions and flows denominated in various currencies into a common currency.

Valuation of Equity Securities

Transactions

5.65 Transactions in equity securities are valued using the actual price agreed upon between the institutional units involved in the transaction. Under normal circumstances, the market value is the price at which these financial instruments are issued, redeemed, acquired, or disposed of in transactions between

independent, willing parties, excluding commissions, fees, and taxes.

5.66 New shares are recorded using their issue value, which is the nominal value plus/minus the issue premium/discount.

5.67 Transactions in shares in circulation are recorded using the transaction value. When the transaction

Box 5.3 Debtor Approach and Creditor Approach to Recording Accrued Interest

Under the *debtor* approach, when debt securities are issued at a fixed rate, the rate of interest payable, and accruing, is fixed at the time the debt security is issued. That is, if the debtor issues a debt security for 100 with an original maturity of ten years, at a fixed rate of 10 percent, with interest payable annually, the interest payments each year are 10 for the next ten years. The rate has been fixed by contract and is therefore not affected by changes in the market interest rate; and the cost of borrowing is known over the life of the debt instrument. By contrast, if the debtor had wanted to borrow at rates that changed along with market rates, the borrowing would have been undertaken at a variable interest rate.

Under the *creditor* approach, the prevailing market rate observed during the period is used to determine the interest paid on a debt security. The rate of interest on the debt security is not fixed but fluctuates with market conditions: as interest rates in the market change, the price of, and hence the return on, the debt security change. As interest flows apply to a period of time and interest rates change almost continuously, the average of the prevailing rate applicable to the debt security over the period is used. This method is more consistent with an active portfolio management approach because it shows the returns vis-à-vis the market value of the portfolio.

There are no differences between the two approaches if the value of the debt security remains unchanged throughout its life. However, the market value of a debt security does in practice vary during its life and debt securities are usually bought and sold on secondary markets. The recording of revaluations and also of realized holding gains and losses in accordance with the debtor approach therefore usually deviates from the corresponding recording following the creditor approach, as illustrated in the example described below.

Suppose a zero-coupon bond is issued on January 1 of year 1. The bond matures on December 31 of year 3 with a redemption value of 100. The discount (interest) rate at the time of issuance is 10 percent and so the value of the bond at issuance is 75.13. The market interest rate remains at 10 percent until January 1 of year 2, when it moves to 15 percent. The change in the interest rate causes the price of the bond to fall from 82.64 ($=100/1.10^2$) to 75.61 ($=100/1.15^2$). The market interest rate then remains unchanged until the bond matures.

The following table shows the developments in the nominal value, the accrued interest due to discount, the market value, and the revaluations arising from market price changes during the life of the zero-coupon bond. It also shows the accounting entries to be made in the debtor's accounts (income, financial, and revaluation accounts and the balance sheet). The creditor would record corresponding entries on the opposite sides of the accounts.

As there is no change in the market interest rate in year 1, the same accounting entries are recorded under both the debtor approach and the creditor approach.

Under the debtor approach, interest accrues continuously, in the amount of 7.51 in year 1, 8.26 in year 2, despite the increase in the interest rate at the beginning of the year, and 9.09 in year 3. Revaluation is derived residually to ensure that the flows are equal to the changes in stocks ($11.35 - 8.26 = 3.09$, in year 2 and $13.04 - 9.09 = 3.95$, in year 3).

Under the creditor approach, the rise in the market interest rate at the beginning of year 2 is fully reflected in the revaluation, and so the market value changes from 82.64 to 75.61 ($=-7.03$), while interest accrues in the amount of 11.34 in year 2 ($=75.61 \times 0.15$). As there is no change in the market value in year 3, no revaluation is recorded, while interest accrues of 13.04 (86.96×0.15).

Box 5.3 Debtor Approach and Creditor Approach to Recording Accrued Interest (*Continued*)

Table 5.3.1 Debtor Approach and Creditor Approach to Recording Accrued Interest						
Stocks and flows during the life of a zero-coupon bond						
	Start year 1	End year 1	Start year 2	End year 2	End year 3	Total
Characteristics of the zero-coupon bond						
Nominal value without accrued interest	75.13	75.13	75.13	75.13	75.13	24.87
+ Accrued interest due to discount		7.51	7.51	7.51	7.51	
				+8.26	+8.26	
				=15.78	+9.09	
					=24.87	
= Nominal value	75.13	82.64	82.64	90.91	100.00	
+ Revaluations arising from market price changes			-7.03	-3.95	0.00	
= Market value	75.13	82.64	75.61	86.96	100.00	
Debtor approach						
Interest payable		7.51	7.51	7.51	7.51	24.87
				+8.26	+8.26	
				=15.78	+9.09	
					=24.87	
Revaluation of liabilities in debt securities			-7.03	+3.08	3.95	
Liabilities in debt securities	75.13	82.64	75.61	86.96	100.00	
Creditor approach						
Interest receivable		7.51	7.51	7.51	7.51	31.90
				+11.34	11.34	
				=18.86	+13.04	
					=31.90	
Revaluation of liabilities in debt securities			-7.03	0.00	0.00	
Claims in debt securities	75.13	82.64	75.61	86.96	100.00	

value is not known, it is approximated using the stock exchange's quotation or market price for listed shares and using the equivalent market value for unlisted shares.

5.68 Scrip dividend shares are shares valued at the price implied by the issuer's dividend proposal and distributed in lieu of cash dividends.

5.69 Issuance of bonus shares is not recorded. However, where the issuance of bonus shares involves

changes in the total market value of a corporation's shares, those changes in market value are recorded in the revaluation account.

5.70 Data on transactions may also be derived from the relevant position data. In this case, transaction prices will usually have to be estimated, for example, by taking unweighted average prices at the beginning and end of the reporting period.

Positions

Listed shares

5.71 Listed shares are valued at market value. The same value is adopted for both the assets side and the liabilities side, although shares (and other equity) are not, legally, a liability on the part of the issuer, but represent the right for the holder to a share in the value of a corporation on liquidation, where the liquidation value is not known in advance.

5.72 Listed shares are valued at a representative mid-market price observed on a stock exchange or other organized financial market (see Box 5.4). There are two possible approaches for the valuation of positions where a large corporation is listed on various stock exchanges (multiple listings): (1) the price on the stock exchange deemed to be most representative; or (2) the average of the market prices available on the various stock exchanges.

Unlisted shares

5.73 Fair values for unlisted shares, which are not traded on organized markets, should be estimated with reference to market equivalents.

5.74 The *2008 SNA* and *BPM6* establish six different methods for the valuation of unlisted shares. These methods are based on the use of:

- Recent transaction prices.
- Net asset values, based on accounting data.
- Present values or price-to-earnings (P/E) ratios, by discounting forecasted future profits.
- Market capitalization or price-to-book-value (P/B) ratios.
- Own funds at book value (OFBV).
- The apportioning of global values.

5.75 These methods may take into account the differences between listed and unlisted shares (notably as regards their liquidity) and consider the net worth accumulated over the life of a corporation, as well as its line of business. However, differences in estimates may also be the result of different valuation methods, with no conceptual interpretation possible.

5.76 Annex 8 contains a more detailed description of the valuation methods for unlisted shares.

Income Attributed to Holders of Equity Securities

5.77 Income attributed to holders of equity securities is part of property income. Property income accrues when the owners of financial assets and natural resources place them at the disposal of other institutional units. Income received in return for the use of financial assets is called investment income.

5.78 Owners of equity securities receive a share of distributed earnings, the timing and level of which are decided by corporations. Equity securities income includes dividends (*2008 SNA*, code D421) as part of the distribution of corporations' income (*2008 SNA*, code D42).

5.79 The distribution of corporations' income in the form of withdrawals from the income of quasi-corporations (*2008 SNA*, code D422) is not part of the income attributed to holders of equity securities, as it is not based on shares.

Dividends as property income

5.80 Dividends are a form of property income to which owners of certain types of shares become entitled as a result of placing funds at the disposal of corporations. Dividends cover all distributions of profits by corporations to their shareholders or owners. Dividends are recorded gross of any withholding taxes deemed to be payable by recipients of such income.

5.81 Dividends also include:

- Shares issued to shareholders as a dividend payment for the financial year (although bonus shares—which represent the capitalization of own funds in the form of reserves and undistributed profits and give rise to new shares for shareholders in proportion to their existing holdings—are not included).
- Income paid to general government by public enterprises that are recognized as independent legal entities and do not constitute corporate enterprises.
- Income generated by activities and transferred to the owners of corporations participating in these activities for their own private use.

Box 5.4 Share Prices and Share Price Indices

Share prices, bids, asks, and spreads

Once a stock has been listed, its shares are bought and sold on a stock exchange or other organized financial market. Such exchanges are organized trading systems in which the prices of stocks are set (and thereafter fluctuate) by means of supply and demand in an auction context. Like all assets, the price of a share is sensitive to demand and many factors will influence demand for a particular share. Share prices are essentially driven by profit expectations, but market sentiment (e.g., bullish, bearish, or herding behavior) can also affect share prices. Analysts seek to understand the market conditions that lead to price changes, or even to predict future price levels.

The “current price” is the price of the most recent trade completed for the share. It is not necessarily the price to be paid or received for a share if an order has just been placed at that moment. During the market day, share quotes are typically delayed by 15 to 20 minutes, unless a real-time quote has specifically been requested. Share prices change frequently, so the last price may no longer be very up-to-date. The highest and lowest prices at which shares have been bought or sold on that day are also usually displayed.

The price quoted may include information on the bid and ask prices for the share. The bid price is the highest price that a brokerage firm (i.e., a market-maker) is willing to pay for a share at a particular time, as with an auction. The ask price is the lowest price at which a brokerage firm is willing to sell a share. The spread is the difference between the bid and ask prices for a traded share.

Share price indices

Share price indices may be classified in various ways. A “world” or “global” share price index (or stock market index) includes (typically large) corporations and corporate groups, regardless of where they are located or trade. Two examples are the Morgan Stanley Capital International (MSCI) World and Standard & Poor’s (S&P) Global 100 indices.

A “national” index indicates the performance of the stock market of a given country and, by extension, reflects investor sentiment regarding the state of the national economy. The most regularly quoted share price indices are national indices composed of the stocks of large corporations listed on the country’s largest stock exchange (e.g., the U.S. S&P 500, the Japanese Nikkei 225, the German Deutscher Aktienindex (DAX), the Russian Trading System Index (RTSI) and the British Financial Time Stock Exchange (FTSE) 100). The concept can be extended far beyond an individual exchange by representing the stocks of nearly all publicly traded corporations in an economy. More specialized indices track the performance of specific sectors of the economy, corporations of a certain size, or companies with a certain type of management. Another point to note is the distinction between price return and total return indices (called simply “price” and “return” indices). Some are price indices (e.g., the FTSE), while others are return indices (e.g., the German DAX), and a third group has both features (e.g., the EURO STOXX 50). Some indices, such as the S&P 500, have a number of different versions. These can differ in terms of the manner in which index components are weighted and the way that dividends are accounted for. For example, there are three versions of the S&P index: (1) a price return version, which considers only the price of the components; (2) a total return version, which accounts for the reinvestment of dividends; and (3) a net total return version, which accounts for the reinvestment of dividends after the deduction of a withholding tax.

An index may also be classified on the basis of the method used to determine its value. In an equally weighted index, the price of each individual stock is the only consideration when determining the value of the index. Thus, a change in the price of a single security can heavily influence the value of the index, ignoring the relative size of the corporation in question. By contrast, a market value weighted or capitalization weighted index takes the size of the corporation into account. Thus, a relatively small shift in the share price of a large corporation can strongly influence the value of the index. In a market share weighted index, a share price is weighted on the basis of the number of shares, rather than their total value. A modified capitalization weighted index is a cross between a capitalization weighted index and an equally weighted index. It is similar to the former with one main difference: the largest stocks are capped at a percentage of the weight of the total share index and excess weight is redistributed equally among the stocks under that cap.

5.82 There are usually three different types of dividend payment:

- Dividends paid in cash.
- Interim dividends.
- Scrip (or stock) dividends.

Dividends paid in cash

5.83 Dividends paid in cash are the most common form of dividend payment.

5.84 Under legislation on public limited companies and limited liability companies, a corporation may only distribute as dividends its annual profits (based on its final income statement for the last year and other equity), following certain deductions. These provisions prevent, among other things, the distribution of interim dividends based on income statements that have not yet been approved.

5.85 Under the same legislation, the distribution of dividends may include any transfer of value, which directly or indirectly benefits shareholders. This notwithstanding, it is assumed that most dividends are paid in cash.

Interim dividends

5.86 Interim dividends are usually paid to shareholders if the preliminary income statement indicates a profit.¹⁴

5.87 Interim dividends are recorded as property income to the extent that they are related to the accrued income of the corporation. In practice, two conditions must be fulfilled:

- The corporation making the payment must make short-period accounts available to the public and the payment must be based on at least two quarters.
- The interim payment should be based on the same proportion of profits as the dividends paid in previous years; consistent with the usual rate of return for shareholders; and in line with trend growth for the corporation.

5.88 If these conditions are not met, the interim payment is recorded as an advance payment until final

annual figures are available, given the need to compare interim dividends with entrepreneurial income for the year.

Scrip (or stock) dividends

5.89 A scrip (or stock) dividend is a pro-rata dividend payment made to shareholders in the form of additional shares. It essentially represents the capitalization of earnings and is an alternative to distributing cash dividends. It is therefore treated as income (in the primary income account), which is then immediately reinvested (in the financial account).

5.90 Additional shares distributed to shareholders may be:

- Newly issued shares financed using the corporation's own funds.
- Treasury shares (i.e., reacquired stock bought back by the issuing corporation).

5.91 As with any scrip issue, the shares issued in order to pay a scrip dividend need to come from the capitalization of reserves.

5.92 A dividend reinvestment plan/program (DRIP) is a means of allowing shareholders to reinvest their dividends cheaply by purchasing more shares in a corporation. From the shareholder's point of view, a DRIP is similar to receiving a scrip dividend, but there are important differences:

- A DRIP does not keep cash within the corporation.
- There are (low) dealing costs.
- The number of shares that a shareholder receives depends on the price on the day that the DRIP operator purchases the shares.

5.93 The advantage of a scrip dividend compared with a DRIP is that there are no dealing costs. Furthermore, the shareholder can make an informed decision as to whether to accept shares rather than cash because the number of shares that will be received is known in advance. Shareholders who wish to reinvest will usually prefer scrip dividends to a DRIP.

Time of recording of dividends

5.94 Dividends are recorded at the point when the share price begins to be quoted on an ex-dividend basis, rather than at a price that includes the dividend (2008

¹⁴Dividends are sometimes paid even if a loss is recorded, where it is expected to be temporary.

SNA, paragraph 7.130). Although dividends represent part of the income generated over a given period, they are recorded after they have been declared but before they are actually payable. This means that the dividend has still to be paid to the owner on the date that it is declared. Consequently, a share sold “ex-dividend” is worth less than one sold without this constraint.

Transactions not defined as dividends

5.95 Dividends do not include the following:

- Bonus shares, that is, new shares issued to all stockholders in proportion to their existing holdings are not considered to be dividends and must be clearly distinguished from scrip/stock dividends. They are not treated as transactions either, because there has been no effective change in terms of the underlying instrument. Shareholders’ claims on the relevant entity do not change as a result of the issuance of bonus shares (see paragraph 6.49).¹⁵
- Liquidation dividends, whether partial or total, arising mainly at the time a corporation is terminated. These are treated as the withdrawal of investment and are, by convention, shown in the financial account, based on the assumption that liquidation dividends are more likely to involve previous equity finance than current income.
- Funds withdrawn by means of the sale or disposal of a quasi-corporation’s assets (e.g., the sale of inventories, fixed assets, or land or other natural resources). Funds resulting from such disposal of assets are recorded as the withdrawal of equity from the quasi-corporation in the financial account.
- Exceptional payments by corporations (including quasi-corporations, such as branches) that are made using accumulated reserves or stem from the sale of assets. Such exceptional payments are treated as the withdrawal of equity and are, therefore, recorded in the financial account. They are sometimes called “super dividends” (see Box 5.5). Payments are usually considered to be exceptional in nature if they are not in line with recent trends.

¹⁵Bonus shares stemming from the transformation of reserves into nominal (issued) capital may lead to changes in the share price.

Box 5.5 Super Dividends

Super dividends are dividends that are large relative to recent dividends and earnings (2008 SNA, paragraph 7.131). The concept of distributable income is used in order to assess whether dividends are large. The distributable income of a corporation is equal to entrepreneurial income plus all current transfers receivable, minus all current transfers payable and minus the adjustment for the change in pension entitlements. The ratio of dividends to distributable income over the recent past is used to assess the plausibility of the current level of dividends. If the level of dividends declared is greatly in excess of that seen in the recent past, those dividends are treated as financial transactions and termed “super dividends.” These super dividends are treated as the withdrawal of owners’ equity. This applies to all corporations, whether incorporated or quasi-incorporated and whether under foreign or domestic private control.

In the case of publicly traded corporations, super dividends are large and irregular payments, or payments that exceed the entrepreneurial income for the relevant accounting period, which are funded using accumulated reserves or through the sale of assets. The super dividends of publicly traded corporations are to be recorded as the withdrawal of equity to the extent that they exceed entrepreneurial income for the relevant accounting period.

Aggregation, Consolidation, and Netting

Aggregation

5.96 Aggregation is the summation of positions, transactions, revaluations or other changes in the volume of assets and liabilities for institutional units belonging to a specific sector or subsector of an economy.

Consolidation

5.97 Consolidation involves the elimination of positions, transactions, revaluations and other changes in the volume of assets and liabilities between institutional units belonging to the same group.¹⁶ Consolidation can be applied at various levels.

¹⁶The concept of consolidation used in business accounting involves extending the boundary to all subsidiaries, eliminating mutual equity holdings, financial links and other transactions, and applying some specific extra accounting treatments. In the national accounts, consolidation involves only the second step, since the boundary for reporting is defined by the sector, sub-sector, or any other grouping under consideration.

5.98 Institutional units can be grouped together or consolidated in two ways. They can be consolidated at subsector, sector, or national level, or at the level of corporate groups. Consolidation at subsector, sector, or national level eliminates issuance and holdings of securities within those various levels. Corporate groups may span sectors or subsectors and thus represent a different taxonomy of units, with entities generally clustered together on the basis of control relationships, rather than functional characteristics. Consolidation at group level eliminates securities held/issued by institutional units within the same group of financial or nonfinancial corporations as the issuer/holder. Institutional units report on a consolidated basis.

5.99 Consolidated presentations entail a reduction in statistical information. However, in some cases, it may be analytically useful to present data that have been consolidated at subsector, sector, or national level—for example, in the case of debt securities issued and held by money-issuing corporations. Another example is the debt securities holdings of general government. When these are consolidated, the holdings of debt securities of general government subsectors other than central government are consolidated with the corresponding debt securities issues of central government. These debt securities do not appear in issues and holdings statistics. Short-term debt securities held and issued by money-issuing corporations may also be presented in consolidated form if they are included in broad money.

5.100 Consolidation at the corporate group level is an example of consolidation on the basis of control relationships. If related institutional units are grouped together to form a single corporate group (for exam-

ple, domestic and foreign subsidiaries of domestic banks are grouped together with their parent bank), all intra-group positions and flows are eliminated from the information reported. Thus, all positions and flows between the various subsidiaries and between those subsidiaries and the parent corporation are eliminated. This approach is useful for financial stability analysis (see Annex 7).

5.101 However, this *Handbook* focuses on the unconsolidated presentation of securities issues and holdings, which is recommended for monetary and macroeconomic analysis. Such a presentation sums up gross positions, transactions, revaluations, and other changes in the volume of assets and liabilities of institutional units belonging to a sector or subsector vis-à-vis all institutional units belonging to the same sector or subsector, to other sectors of the economy, and to other economies.

Netting

5.102 The term “net” is used as follows: (1) net recording means summing all debits and credits for a financial asset or liability category or subcategory (described in Chapter 6); and (2) netting of an asset against a liability.

5.103 Net recording refers always to aggregations for which all debit entries of a particular asset or liability are netted against all credit entries in the same asset or liability type (e.g., bond issues are netted against bond redemptions).

5.104 When the term “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 (*BPM6*, paragraph 3.114).



6

Specific Operations Related to Securities

6.1 Chapter 6 deals with specific operations related to securities. The first part of this chapter focuses on debt securities issued under securitization schemes. It provides a general description of securitization, covering its principal features and the main institutional units that can be involved in securitization transactions, together with a streamlined classification for various financial instruments within the statistical framework for debt securities statistics. The remaining parts of the chapter deal with other specific operations related to securities holdings.

Securitization

6.2 Securitization results in debt securities for which the coupon or principal payments (or both) are backed by specified financial or nonfinancial assets or future income streams.¹ A variety of assets or future income streams may be securitized, including, among others, residential and commercial mortgage loans, consumer loans, corporate loans, government loans, credit derivatives, and future revenue.

6.3 The securitization of assets or future income streams is a well-established process that has operated for some decades. More recent financial innovations have led to the establishment and extensive use of new financial corporations to facilitate the creation, marketing, and issuance of debt securities. Furthermore, securitization schemes have become increasingly sophisticated.

¹In the European Union (EU), the definition of securitization is narrower than the one in this *Handbook*. In particular, the definition of securitization in Regulation (EU) No. 1075/2013 of the ECB of October 18, 2013, concerning statistics on the assets and liabilities of financial vehicle corporations engaged in securitization transactions (recast) (ECB/2013/40) is similar to the definitions given below for Type 2 and Type 3 securitization schemes. By definition, Type 1 securitization schemes, or on-balance-sheet securitization, are outside the scope of the ECB Regulation.

6.4 Securitization is driven by various considerations. For corporations these include: cheaper funding costs than available through banking facilities; reduction in regulatory capital requirements; the transfer of risk; and the diversification of funding sources. For governments, the main motivating factor is to reduce the average cost of budget financing relative to when conventional government debt securities issues are used.

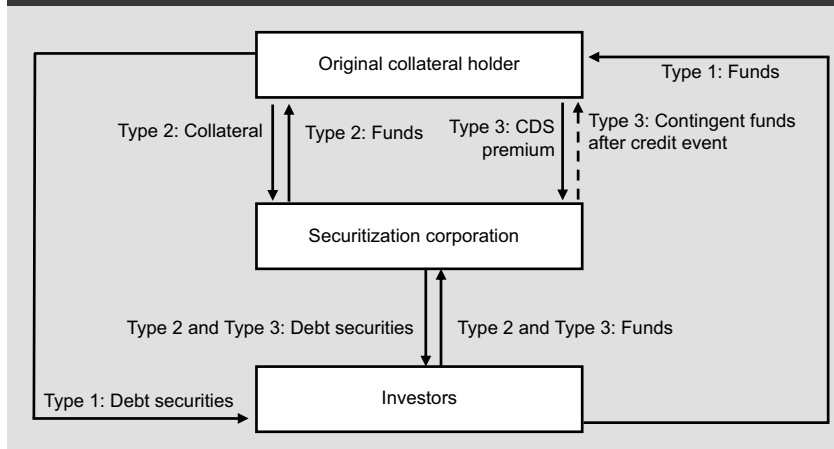
The Securitization Process

6.5 Securitization schemes vary within and across debt securities markets. They can be grouped into three broad types.² First, those in which the original asset owner creates new debt securities, that is, there is no securitization corporation involved and no transfer of assets (Type 1 in Figure 6.1). Second, those involving a securitization corporation and a transfer of assets from the original asset owner (Type 2 in Figure 6.1). Third, those involving the transfer of credit risk only, but not the transfer of assets, either through a securitization corporation or through the direct issue of debt securities by the original asset owner (Type 3 in Figure 6.1).

6.6 The first type of securitization scheme, usually known as on-balance-sheet securitization, involves debt securities issues backed by an income stream generated by the assets. The assets remain on the balance sheet of the debt securities issuer (the original

²Transactions where the original asset owner converts one type of asset (e.g., loans) on its balance sheet to another type of asset (e.g., debt securities) through a securitization corporation are not considered to be securitization, but rather a restructuring of assets. In this case, the original asset owner sells assets to a securitization corporation and the securitization corporation then issues debt securities back to the original asset owner. The original asset owner typically retains these debt securities on its balance sheet rather than trade them in the secondary market. The debt securities issued by the securitization corporation should, however, be included in debt securities statistics.

Figure 6.1 Securitization Process



asset owner), typically as a separate portfolio. The issue of debt securities provides the original asset owner with funds.

6.7 The second type of securitization scheme, typically referred to as true sale securitization, involves debt securities issued by a securitization corporation where the underlying assets have been transferred from the original asset owner's balance sheet. The proceeds received from selling the debt securities to investors fund the purchase of the assets. The income stream from the pool of assets (typically, interest payments and principal repayments on the loans) is used to make the coupon payments and principal repayments on the debt securities.

6.8 The third type of securitization scheme, often referred to as synthetic securitization, involves transfer of the credit risk related to a pool of assets without transfer of the assets themselves. The original asset owner buys protection against possible default losses on the pool of assets using credit default swaps (CDS).³ The proceeds from the issue of debt securities are placed by a securitization corporation on deposit, and the interest accrued on the deposit, together with the premium from the CDS, finances coupon payments on the debt securities. In the event of default, the protection buyer (the original asset owner) is compensated by the protection seller for the default

³ A credit default swap is a financial derivative whose primary purpose is to trade credit default risk (2008 SNA, paragraph 11.123).

losses related to the pool of assets, while the holders of the debt securities suffer losses for the same value.⁴

6.9 Synthetic securitization without the involvement of a securitization corporation occurs when the original asset owner issues credit-linked notes (CLN). CLN are debt securities that are backed by reference assets, such as loans and bonds, with an embedded CDS allowing credit risk to be transferred from the issuer to investors. Investors sell credit protection for the pool of assets to the protection buyer (or issuer) by buying the CLN. Repayment of principal and interest on the notes is conditional on the performance of the pool of assets. If no default occurs during the life of the note, the full redemption value of the note is paid to investors at maturity. If a default occurs, then investors receive the redemption value of the note minus the value of the default losses.

Statistical Classification

6.10 In each type of securitization scheme described previously, a range of debt securities may be issued by the original asset owner (Type 1) or the securitization corporation (Type 2 and Type 3), such as: asset-backed securities (ABS), including asset-backed commercial

⁴ The debt securities issued can be split into different credit-rated tranches enabling holders with different risk profiles to satisfy the investment criteria. The most senior tranche has the first claim on the securities' underlying assets, with the priority of claims decreasing thereafter to the most junior tranche. If a default occurs, the coupon payments to holders of debt securities in the junior tranche are the first to be redirected to the original asset owner.

paper (ABCP), covered bonds,⁵ CLN, and structured credit securities, including collateralized debt obligations (CDO).

6.11 ABS, such as residential mortgage-backed securities (RMBS), are debt securities created through securitization that typically have an original term to maturity of more than one year, and are usually backed by long-term mortgages. ABCP are a type of debt security similar to ABS, but with an original term to maturity of one year or less. ABCP may be backed by residential mortgages or assets such as short-term trade receivables, leases, or margin loans. ABS and ABCP are classified as debt securities because the security issuers are required to make payments, while the holders do not have a residual claim on the underlying assets; if they did, the instrument would be classified as either equity securities or investment fund shares or units (*BPM6*, paragraph 5.47).

6.12 Covered bonds are debt securities created through securitization and issued by the original asset holder that are backed by assets remaining on the holder's balance sheet, but are identified as belonging to a cover pool.⁶ The cover pool consists mainly of mortgages with a high credit rating or loans to the public at large. In the *MFSCG*, covered bonds are referred to as mortgage-backed bonds (*MFSCG*, paragraph 4.24).

6.13 The criteria used to classify CLN as securitization debt securities are based on whether or not they are backed by payments on specified assets or income streams, rather than whether or not they are issued by a securitization corporation.

6.14 CDO are debt securities created through securitization that are backed by a relatively small pool of heterogeneous debt instruments, such as bonds and loans. The liabilities created through the CDO are ranked to

protect investors against different levels of credit risk. Similar instruments include collateralized mortgage obligations (CMO), collateralized loan obligations (CLO), and collateralized bond obligations (CBO).

6.15 The treatment of securitization schemes and their classification into sectors and subsectors varies according to the type of scheme. In Type 1 and some Type 3 securitization schemes, where the original asset owner issues debt securities, the issuing institutional unit may be a corporation or a general government unit. In Type 2 and some Type 3 securitization schemes, where a securitization corporation issues the debt securities, the issuing institutional unit is a financial intermediary in the financial corporations' subsector "other financial intermediaries except insurance corporations and pension funds."

6.16 Some financial corporations are created to hold securitized assets or other assets that have been removed from the balance sheet of the original asset owner, or to issue debt securities that are backed by these assets (or both). It is essential to establish whether these corporations actively manage their portfolio and bear risk, or simply act as trusts that passively manage assets or hold debt securities. When the corporation is the legal owner of a portfolio of assets, issues debt securities that represent an interest in the portfolio, has a full set of accounts, and bears market and credit risks it is acting as a financial intermediary and, in particular, as a securitization corporation. In this case, the securitization corporation is classified in the financial corporations subsector "other financial intermediaries except insurance corporations and pension funds."

6.17 Securitization corporations are distinguished from units that are created solely to hold specific portfolios of financial assets and liabilities. Where the unit does not bear market or credit risks, it is combined with its parent corporation if it is resident in the same economy as the parent. Where the unit is set up outside the economic territory in which the parent corporation is located, it is considered resident in the economy in which it is incorporated, even if it has little or no physical presence there. In these cases, it is treated as a separate institutional unit of the financial corporations subsector "captive financial institutions and money lenders" of the host economy.

⁵Debt securities issued under similar schemes include: Pfandbriefe, obligations foncières, obbligazioni bancarie garantite, lettres de gage hypothécaires and lettres de gage publiques, obrigações hipotecárias and obrigações sobre o sector público, and cédulas hipotecarias and cédulas territoriales.

⁶In the EU, covered bonds are defined by Regulation (EU) No. 575/2013 on prudential requirements for credit institutions and investment firms, which limits the range of accepted assets. The Regulation is part of the so-called CRDIV package replacing the previous Capital Requirements Directives. See Regulation (EU) No. 575/2013 of the European Parliament and of the Council of June 26, 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No. 648/2012 (OJ L 176, 27.06.2013, p. 1).

6.18 General government units may also be involved in securitization schemes. There are two cases that need to be considered for classification purposes.

- Where a general government unit is the original asset owner and it transfers assets, such as government loans extended to other sectors, to a separate securitization corporation, the distinction between securitization debt securities and conventional government debt securities is based on the involvement of the securitization corporation that issues debt securities backed by the loans.
- A general government unit may also issue debt securities backed by specific, earmarked future revenue rather than loans or other financial assets that it holds on its balance sheet. In this case, the distinction between securitization debt securities and conventional government debt securities is not so straightforward.⁷

Reverse Transactions

Main Features

6.19 Reverse transactions are arrangements that involve the sale (and a change of legal ownership) of securities, with a commitment to repurchase the same or similar securities either on a specified date or with open maturity at a pre-agreed price. Reverse transactions have two common characteristics: (1) a commitment to reverse the transaction on a specified future date (or on demand); and (2) although legal ownership is transferred to the purchaser, all of the risks and benefits of ownership remain with the original owner. Reverse transactions include: securities repurchase agreements (repos); securities lending; and sell/buyback transactions (2008 SNA, paragraph A4.46).

6.20 The commitment to reverse the change in legal ownership in the future at a fixed price means that the original owner retains the risks and benefits of changes in the price of the asset. The lender still

receives the income yielded by the security-coupon payments and dividends are passed on in the form of a “manufactured dividend.” Accordingly, the economic ownership of securities provided under reverse transactions does not change.

6.21 Reverse transactions require diligent data collection. Because legal title and economic ownership are distinguished, the security-provider, security-receiver, or other sources, such as custodians’ records or securities registers, may record the positions inconsistently. Indeed, a security subject to a reverse transaction could potentially be recorded as being owned by both parties (BPM6, paragraph 7.58).

6.22 A reverse transaction may or may not involve the supply of cash. If cash is supplied, as occurs in repos and securities lending with cash collateral, one party supplies securities and receives cash in exchange. Since the securities remain on the balance sheet of the original holder, the counterpart to the exchange of cash is recorded as a loan received. The exchange of funds under reverse transactions does not involve the issuance of any new securities. Indeed, no transaction is recorded in the underlying securities, and, unless the transfer of securities is accompanied by an exchange of cash, no loan or deposit is created and neither the 2008 SNA nor the BPM6 require any transaction to be recorded.

6.23 Table 6.1 provides an overview of the main features of the different types of reverse transactions. Securities lending, which involves the temporary transfer of securities by the lender (the seller of the securities or cash receiver) to the borrower, may require the securities borrower to provide assets as collateral in the form of cash or securities. Legal title passes on both sides of the transaction so that the borrowed securities and collateral can be sold or on-lent. Again, however, no transaction in the securities exchanged is recorded.

6.24 Repos and sell/buyback transactions are also used for the temporary transfer of securities against cash. In general, securities lending is more likely to be motivated by the wish to borrow specific securities, while the reason for repos and buy/sell-back transactions is more likely to be the wish to lend or borrow cash.

6.25 From a legal perspective, a repurchase transaction (purchase and repurchase) is usually considered to be one transaction, whereas a sell/buyback transaction is considered to constitute two transactions—a separate

⁷The ability to raise taxes or other government revenue is not classified as an asset in the 2008 SNA. Nevertheless, the earmarking of future revenue, such as receipts from road tolls, to service debt securities issued by general government may resemble securitization. General government units that use these schemes give the holders of the securitization debt securities a higher level of protection, or a preferred status, as the principal repayments and coupon payments are backed by earmarked future revenue. In the EU, methodological criteria have been developed for securitization undertaken by general government.

Table 6.1 Main Features of Reverse Transactions

Feature	Securities lending		Repurchase agreements (based on specific securities or general collateral)		Sell/buyback transactions
	Cash collateral	Without cash collateral			
Formal exchange arrangement	Lending of specific securities with an agreement by the borrower to deliver them back to the lender		Sale of securities with a commitment to repurchase them under terms of a master agreement		Spot sale and forward purchase of securities
Subject matter of exchange	Specific securities for cash	Specific securities for other collateral (if any)	Specific securities for cash	General collateral for cash	Cash for securities
Return is paid to the supplier of	Securities		Cash		Cash
Return payable in the form of	Fee		Repo rate		Difference between the forward and the spot prices (usually equal to the repo rate)

purchase and sale (although, again, no transaction in the securities exchanged is recorded). The main difference between repurchase and sell/buyback transactions is the treatment of the coupon payment. In a repurchase transaction the coupon is paid by the buyer to the original owner on the coupon payment date, whereas in the case of sell/buyback transactions the coupon payment is included as part of the price in the second leg of the trade.

6.26 If the agreed form of collateral is cash, the parties negotiate a return, in the form of a fee, which may be quoted as a “rebate”: the lender earns all of the interest that accrues on the cash collateral, and “rebates” an agreed rate of interest to the borrower.

6.27 Where collateral other than cash is provided, the parties negotiate a fee, quoted as an annualized percentage of the value of the securities lent. Thus the fees for securities lending without cash collateral represent payment for putting a financial instrument at the disposal of another institutional unit. Fees associated with securities lending (shares and debt securities) are treated as interest (*BPM6*, paragraph 11.66).

Reverse Transactions with Cash Collateral

6.28 A repo is a type of reverse transaction involving the provision of securities in exchange for cash with a commitment to repurchase the same or similar securi-

ties at a fixed price, either on a specified future date or with an “open” maturity. Repos, securities lending with cash collateral and sell/buybacks all involve the provision of securities as collateral for a loan or a deposit (*2008 SNA* and *BPM6*). Buy/sell-backs and sell/buybacks are repo-type agreements consisting of a combination of a spot transaction and a forward transaction.

6.29 The securities provided under a repo are regarded as still being economically owned by the security-providing party (*BPM6*, paragraphs 5.52 to 5.54). A repo is viewed from the perspective of the securities provider (i.e., “the cash borrower”). The agreement is called a reverse repo when viewed from the perspective of the securities receiver (i.e., the “cash provider”).

6.30 The supply and receipt of funds under a repo is treated as a loan or as a deposit. It is generally a loan, but constitutes a deposit if the cash borrower (i.e., the securities’ provider) is a deposit-taking corporation and the cash provider is not a deposit-taking corporation, in which case the resulting liability may be included in national measures of broad money.

Reverse Transactions without Cash Collateral

6.31 Securities lending without cash collateral consists of the delivery of securities for a given time period. If a reverse transaction does not involve the supply of

cash, there is no loan or deposit transaction. Although the legal ownership has changed, the economic ownership of the securities provided as collateral under a reverse transaction is treated as not having changed. Therefore, no transaction should be recorded. The securities lent remain the assets of the delivering unit, and the securities received as collateral continue to be recorded as financial assets of the institutional unit lodging the collateral. This treatment is adopted because the original owner is still subject to the risks and benefits of any change in the price of the security.

6.32 The borrowers (e.g., brokers) may subsequently on-sell the securities outright to other clients. The ability of the borrower to on-sell the securities reflects the fact that legal ownership has been transferred to the borrower, while the economic risks and benefits of ownership remain with the original owner. In return, the “lender” receives a fee from the “borrower” for the use of the security.

Short-Selling

6.33 Short-selling (also known as “shorting” or “going short”) is the practice of selling assets, usually securities, that have been borrowed from a third party with the intention of buying identical assets back at a later date to return to the lender. Short-sellers hope to gain from a decline in the value of the assets, in which case they will pay less to repurchase the assets than they received on selling them. Conversely, short-sellers will make a loss if the price of the assets rises. Short-selling may be facilitated by brokers who, for a fee, arrange the lending of a security owned by one customer (the “lender”) to another (the short-seller). The short-seller then sells the security in the market (to the “purchaser”). The “lender” does not retain the legal ownership of the security, but does retain the economic ownership and may request the security at any time from the broker. The broker will then deliver an identical security, which he can usually obtain from the large pool of securities held by his customers.

6.34 When debt securities are sold short, legal title passes to the purchaser while the lender (the original owner of the security) retains economic ownership. However, it could be said that both the lender and the purchaser of the security sold short are the economic owners, as they are both subject to the risks and benefits of the security. To avoid doublecounting, a nega-

tive holding of the debt security should be recorded for the position of the short-seller, and the transaction accounts should reflect a sale from the short-seller to the purchaser, which is also the counterpart entry to the cash flow from the purchaser to the short-seller. In the distribution of income account, accrued interest payable by the short-seller to the lender is to be treated as negative income receivable by the short-seller, while the purchaser and the lender record the corresponding accrued interest payments.

Stripped Securities

6.35 Separate trading of registered interest and principal of securities (STRIPS) are securities that have been transformed from a principal amount and periodic coupons into a series of zero-coupon bonds, with the range of maturities matching the coupon payment dates and the redemption date of the principal amount. STRIPS can be created in two ways. First, the owner of the original security can ask the settlement or clearinghouse in which the security is registered to create STRIPS from the original security, in which case the STRIPS replace the original security and remain the direct obligation of the issuer of the original security. Second, the owner of the original security can issue STRIPS in its own name, backed by the original security, in which case the STRIPS represent new liabilities of the owner of the original security and are not the liability of the issuer of the original security. This applies more generally to various ABS.

6.36 When the entity issuing the STRIPS is creating new liabilities, double counting does not arise. The potential for double counting arises when the STRIPS have replaced the original security even though the latter has not been redeemed. In essence, the original security is “dormant” in the settlement or clearinghouse until such time as it is reconstituted or redeemed.

6.37 STRIPS with an original maturity of less than one year are short-term debt securities. If identifiable, they should be reported as such.

Nominee Accounts

6.38 A nominee account is a legal device for holding assets, which may be used for reasons of confidentiality or convenience. The assets held in nominee accounts should be attributed to the economic (beneficial) owner, not the nominee.

6.39 The correct approach is to “look through” nominees. This means that the holdings are treated as if the nominee account had not been used and the beneficial owner is reported as the holder. However, for issuers of securities it may be difficult to identify whether nominees hold assets in their own right or as nominees; and, if the nominees hold them on behalf of someone else, it may be difficult to identify the beneficial owner, especially when nonresident nominee accounts and custodians are used. For example, if a resident of country A holds securities issued by a resident of country B and uses a nominee account in country C, and the securities are kept in custody in country C, the custodian in country C may not be aware that the ultimate owner is in Country A.

Shareholders’ Rights and Subscription Rights

Shareholders’ Rights

6.40 Shareholders are granted rights depending on the class of shares. They have the right to:

- Vote on matters such as elections to the board of directors
- Share in the distribution of the corporation’s income
- Purchase new shares issued by the corporation (subscription rights)
- Lay claim to the corporation’s assets in the event of its liquidation.

6.41 However, shareholders’ rights to a corporation’s assets in the event of liquidation are subordinated to the rights of the corporation’s creditors.

6.42 Some form of weighting may be applied to the voting rights of the various shareholders, but it is more common for voting rights to be proportionate to the number of ordinary shares held or their nominal value. Unless the corporation’s statute provides otherwise, every member has one vote per ordinary share held.

6.43 Specific rights may be conferred on a particular shareholder (or class of shares) by the corporation’s statute, or under the terms of a share issue or shareholders’ agreement. A corporation’s capital may also be divided into separate classes, with specific rights attached to each class.

6.44 A corporation may also issue nonvoting shares. Provided that it issues some voting shares, there is no limit to the percentage of capital that may be represented by nonvoting shares.

Subscription Rights

6.45 Subscription rights that are traded separately are often given their own separate International Securities Identification Number (ISIN). They are classified as shares, rather than as financial derivatives, since they represent a claim on the residual value of a corporation.

6.46 Issuers of shares use subscription rights to provide existing shareholders with the opportunity to participate in new issues, which enables them to retain their proportional share in the ownership of the corporation. To make the new shares even more attractive, these subscription rights may also allow existing shareholders to buy the shares at less than the market price.

6.47 When new shares in a corporation are issued, they may be offered to holders of (ordinary or preferred) shares that have obtained a certain amount of subscription rights by a certain date. These rights may be traded separately on the exchange during a specific period of time. Only holders of subscription rights are allowed to purchase new shares. Such tradable rights in the form of temporary listed securities are also called “nil-paid letters.” Shareholders that do not have subscription rights might not have the right to buy new shares.

Bonus Shares

6.48 Bonus shares are new shares issued to all shareholders in proportion to their existing holdings by converting a corporation’s reserves into share capital (equity securities). This is simply the capitalization of the corporation’s reserves. Holders receive new shares and the number of shares increases, but the relative claims of the various shareholders remain unchanged.

6.49 The issuance of bonus shares does not constitute a financial transaction between the shareholders and the corporation, as there is no change in the total amount of the underlying financial asset. As mentioned previously, the shareholders’ claims on the corporation remain unchanged (see also paragraph 5.95).

6.50 Bonus shares are designed to improve the liquidity of the shares on the market, so the total market value of shares issued may rise. Any such change is

recorded as a holding gain. They are also a way for corporations to reward shareholders without triggering a tax event, which generally happens when cash dividends are paid.

Stock Splits and Reverse Splits

6.51 Stock splits are operations that split existing shares. They reduce the share price and increase the number of shares available in the market, with the aim of increasing the liquidity and affordability of the share. For example, in a two-for-one split, every shareholder with one stock is given an additional share, so if a corporation has 10 million outstanding shares with a value of one currency unit each before the split, it will have 20 million outstanding shares with a value of 0.5 currency unit each after the split.

6.52 So, a stock split reduces the price of a share, since the number of outstanding shares increases. As mentioned previously, in the case of a two-for-one split, the share price will be halved. Thus, although the number of outstanding shares and the stock price change, the market capitalization remains constant.

6.53 A corporation usually carries out a stock split when its share price has increased to levels that are too high or exceed those of similar corporations. The primary motive is to make shares more affordable to small investors, while the underlying value of the company does not change.

6.54 Another type of stock split is the reverse split. This procedure is typically used when a corporation wants to increase its (low) share price in order to achieve greater respectability in the market or prevent the corporation from being delisted. (Many stock exchanges will delist stocks if they fall below a certain price per share.) For example, in a reverse five-for-one split, 10 million outstanding shares with a value of 0.5 currency unit each become two million outstanding shares with a value of 2.5 currency units each. In both cases, the company is worth five million currency units.

6.55 Stock splits and reverse splits do not constitute transactions.

Share Buybacks

6.56 Corporations may buy back their own equity in a share repurchase, also known as a “stock repurchase” or a “share buyback.”

6.57 There are two different ways of recording such operations.

- In *national accounts*, a share buyback is recorded as the redemption of equity securities. These are recorded as financial transactions, with cash provided to existing shareholders in exchange for a share in the corporation’s outstanding equity, that is, cash is exchanged for a reduction in the number of outstanding shares. Because a corporation cannot have a claim on itself, the liability is deemed to have been extinguished, even if the shares are not cancelled. The corporation either retires the shares or keeps them as “treasury stocks,” available for reissuance.
- In *securities statistics*, share buybacks are not netted out, as listed corporations may purchase and sell their own shares continuously. Many listed corporations hold varying amounts of their own shares for various purposes (e.g., in order to increase market liquidity). Share buybacks are often subject to strict regulation and requirements with regard to the reporting of holdings to financial market supervisors and/or stock exchanges. A reduction in outstanding amounts can only be recorded once the shares that have been bought back are formally extinguished or cancelled (e.g., by reducing the nominal or issued capital in the balance sheet of the corporation and/or reducing its market capitalization on the stock exchange). However, differences between a corporation’s outstanding shares and its (paid-up) registered capital might be difficult to distinguish.

6.58 It should be noted that the two different ways of recording these operations lead to discrepancies between securities statistics and national accounts.

Mergers and Acquisitions

6.59 Mergers arise when two or more corporations agree to combine to form a single entity.

6.60 Acquisitions involve the purchase of one corporation or a group of corporations by another (albeit the purchasing corporation may not acquire all of the shares in the former).

6.61 Corporate restructuring in the form of mergers and acquisitions causes the appearance and disappearance of financial assets and liabilities. When

a corporation ceases to be an independent legal entity because other corporation(s) absorb(s) it, all of its financial assets and liabilities (including shares and other equity) vis-à-vis the corporation(s) that absorbed it disappear from the national accounts. This is recorded as changes in sectoral classification and structure in “other changes in the volume of assets and liabilities.”

6.62 However, the purchase of a corporation’s shares and other equity as part of a merger is recorded as a financial transaction between the purchasing corporation and the previous owner.

6.63 The replacement of existing shares with shares in the new corporation is recorded as the redemption of shares accompanied by the issuance of new shares. The absorbed corporation’s financial assets and liabilities vis-à-vis third parties remain unchanged and pass to the absorbing corporation(s). Where necessary (e.g., where the absorber and the absorbed corporation belong to different sectors), this passing on of assets and liabilities is also recorded as “other changes in the volume of assets and liabilities.”

6.64 In the context of mergers and acquisitions, “squeeze-outs” and other restructuring operations, temporary or intermediary shares are often created for technical reasons. These intermediary shares usually exist only for a few months (or less) and are used to manage the often complex exchange and conversion of shares.

6.65 When a corporation is split up from a legal perspective into two or more institutional units, new financial assets and liabilities are recorded as changes in sectoral classification and structure.

Privatization and Nationalization

Privatization

6.66 Privatization generally constitutes the transfer to nongovernment owners, by a government unit, of the controlling equity of a public corporation or quasi-corporation. The proceeds of privatization are not government revenue. Payment is considered to be a financial transaction, with no impact on the government’s deficit or surplus, as the event has no impact on net worth and simply represents a change in the composition of assets (F5 as opposed to F2) in the government’s balance sheet. Thus, the proceeds of

privatization are to be recorded gross in the financial accounts.

6.67 Privatization may also take place by means of more complicated institutional arrangements. For instance, the assets of a public corporation may be sold by a public holding company or another government-controlled public corporation, with all or part of the proceeds passed on to the government.

6.68 In all cases, the payment to the government of the proceeds from such asset sales is to be recorded as a financial transaction, irrespective of the way it is presented in the accounts of the government or one of its subsidiaries, with a simultaneous decrease in shares and other equity corresponding to the partial liquidation of the assets of the holding company. Any proceeds of privatization that are retained by the holding company represent government revenue ploughed back in by means of a capital injection.

6.69 It may also be that the public holding company (or another public corporation) acts as a “restructuring agency.” In such a situation, it may be that the proceeds of the sale are not paid to the government and are instead kept by the restructuring agency in order to inject capital into other enterprises.

6.70 When the restructuring unit, whatever its legal status, acts as a direct agent of the government, its main function is to restructure and change the ownership status of public corporations and to channel funds from one unit to another. The unit will usually be classified as belonging to the general government sector.

6.71 However, when the restructuring unit is a holding company controlling a group of subsidiaries, but not performing a management function, and only a small percentage of its activities are dedicated to the previously mentioned channeling of funds for public policy purposes on behalf of the government, the public holding company is allocated to the financial corporations sector and treated as a captive financial institution, even if all of the subsidiary corporations are nonfinancial corporations.

Nationalization

6.72 Nationalization is generally the acquisition from nongovernment owners, by a government unit, of the controlling equity of a corporation or quasi-corporation. Nationalization usually takes the form of the purchase of shares in exchange for currency

or deposits, or is financed by means of a debt instrument. The government buys all or part of the shares in the corporation at the market price—or at a price that is sufficiently close to that level, taking into account standard market practices with regard to the valuation of corporations in that area of activity.

6.73 The transaction is by mutual consent, although the initial owner may have limited scope for refusing the offer or negotiating the price. The purchase of shares is to be recorded in the financial account as a financial transaction.

6.74 Exceptionally, the government may acquire ownership of a corporation by means of its appropriation or confiscation. Here, the change in the ownership of assets is not the result of a transaction conducted by mutual consent. No payment is made to owners, or the payment does not fairly reflect the value of the assets. The difference between the market value of the assets acquired and any compensation provided is recorded as an uncompensated seizure in “other changes in the volume of assets.”

Debt-for-Equity Swaps

6.75 Debt-for-equity swaps are exceptional financing transactions involving the exchange (usually at a discount) of debt instruments relating to an economy for (typically nonresident) investors’ equity investment in the economy. Generally, such arrangements result in the extinguishing (debit item) of a fixed payment liability, debt security, or loan (usually denominated in foreign currency), to be recorded under the appropriate instrument, and the creation (credit item) of an equity liability (denominated in domestic currency) vis-à-vis the investor in question, to be recorded under direct or portfolio investment as appropriate.

6.76 Under these swaps, bank loans or corporate liabilities can be exchanged for equity, or the central bank may redeem the outstanding debt at a discount in local currency (credit item), with the recipient (typically a nonresident) reinvesting the proceeds as equity in the enterprise in question.

6.77 Where debt is exchanged directly for equity investment in the debtor economy, credit entries should be made under direct investment/equity capital if the direct investor (equity holder) directly holds equity that entitles it to 10 percent or more of the voting rights in the enterprise. Otherwise, the equity claim should be recorded under portfolio investment/equity securities. These transactions should be recorded using the value of the equity acquired, with offsetting debit entries made under the appropriate debt instrument for the reduction in liabilities.

6.78 For indirect debt-for-equity swaps, whereby debt is exchanged for a local currency claim (deposit), which is, in turn, exchanged for equity liabilities on the part of the debtor, transactions are recorded for both the initial exchange (i.e., the swapping of debt for deposits, with the transaction recorded using the value of the deposits) and the exchange of deposits for equity. Equity liabilities (either direct or portfolio) increase and debt liabilities decrease by the value of the instrument extinguished.

6.79 All transactions should be valued using the market price of the new claim received. If there is a difference in value between the old and new claims, this is recorded as a valuation adjustment in the revaluation account, rather than as a transaction—except where nonmarketable debt owed to official creditors is involved, in which case any reduction in the value of the old debt is recorded as debt forgiveness (capital transfer).



7

Classification of Securities

7.1 Chapter 7 explains how securities statistics can be presented according to different classifications: issuing sector and subsector, currency, maturity, interest rate, and market. The *Handbook* also looks at classification by default risk, although a specific classification scheme is not recommended for the detailed tables in Chapter 9 because further work is required in this area. These classifications are useful for the analysis of securities markets from the perspective of monetary policy formulation and monitoring, financial integration, financial market regulation, and financial stability.

7.2 The tables in Chapter 9 can be used to present statistics on securities issues and holdings with different classifications. The tables are designed to capture a wide range of securities characteristics, although only a subset of the cells in the tables might be relevant for a particular economy, given the volume and structure of its securities markets and the regulations that govern trading in these financial instruments.

Issuance and Holding of Debt Securities by Sector and Subsector

Issuers of Debt Securities

7.3 Debt securities are predominantly issued by non-financial corporations, financial corporations, and general government. Households and nonprofit institutions serving households (NPISHs) may be legally entitled to issue debt securities. In the case of households, debt securities can be issued to finance dwelling purchases.

7.4 It may also be possible to report additional items for monetary policy and financial stability analysis.

7.5 The financial corporations sector can be broken down into debt securities issued by:

- The central bank
- Other money-issuing corporations comprising the subsectors “deposit-taking corporations

except the central bank” and some money market funds (MMFs)¹

- Securitization corporations
- Other financial corporations, that is, financial corporations other than the central bank, other money-issuing corporations, and securitization corporations.

7.6 The general government sector can be broken down into debt securities issued by:

- Central government
- State government
- Local government
- Social security funds.

7.7 It may also be analytically useful to aggregate debt securities issued across different institutional sectors. The public sector provides a broader coverage than the general government sector as it combines debt securities issued by general government and public corporations, including the central bank.

Holders of Debt Securities

7.8 The term “debt securities holdings” refers to the ownership of debt securities (financial assets) by an institutional unit.²

7.9 Changes in the debt securities holdings of an institutional unit are either a consequence of its financial transactions (i.e., its acquisitions, disposals, or redemptions of debt securities), or of revaluations or other changes in the volume of assets.

¹The money-issuing sector usually covers the central bank, deposit-taking corporations except the central bank and MMFs. MMFs are only included in the money-issuing sector if they issue liabilities included in the national definition of broad money.

²The term “holdings” is used as a synonym for stocks (see 2008 SNA, paragraph 3.4).

7.10 From a monetary or economic policy perspective, it is important to analyze holdings of debt securities and—in the case of debt securities issued by residents—to know the relative size of holdings of residents and nonresidents and, within each category, the amounts held by sector and subsector. This may also be of interest for financial stability analysis, in particular to assess the holdings of nonfinancial corporations and the household sector.

7.11 Debt securities are usually held by any resident institutional sector and subsector and by nonresidents as part of their portfolio. Of specific interest are the debt securities holdings of financial corporations, in their capacity as institutional investors, of households and, to a lesser extent, of nonfinancial corporations and general government. Specific attention is given to nonresidents holding debt securities issued by residents.

7.12 Debt securities holdings of the financial corporations sector may be broken down into the holdings of:

- The central bank
- Other money-issuing corporations, comprising the subsectors “deposit-taking corporations except the central bank” and MMFs
- Non-MMF investment funds
- Securitization corporations
- Insurance corporations
- Pension funds
- Other financial corporations.³

7.13 From the perspective of monetary policy and financial stability analysis, it may also be useful to show institutional investors as important holders of debt securities. Institutional investors are generally understood to cover a subset of financial corporations, namely those classified in the subsectors:

- Investment funds (MMFs and non-MMFs)
- Insurance corporations
- Pension funds.⁴

³These are financial auxiliaries, captive financial corporations and money lenders, and financial intermediaries other than securitization corporations, such as security and derivative dealers, financial corporations engaged in lending, central clearing counterparties, and specialized financial corporations, as outlined in *2008 SNA*, paragraph 4.110 (e). Financial auxiliaries include head offices (of financial corporations), while captive financial institutions and money lenders include holding corporations. It may be necessary to show them separately.

⁴See OECD, *Institutional investors' assets*, Stat Extracts.

7.14 Nonresidents, as holders of debt securities, may be broken down by country or group of countries, although the composition of countries or groups of countries may change over time, depending on their relative importance to the national economy.

7.15 Nonresidents, as holders of debt securities, may also be classified by institutional sector or subsector of financial corporations. If analytically useful, debt securities held by specific countries or groups of countries can be further broken down by sector and subsector.

7.16 Two major issues may arise from these breakdowns: (1) confidentiality issues with regard to the use of country and sector information; and (2) challenges in identifying nonresident holdings by institutional sector of the holder.

7.17 More detailed data may also be useful on the characteristics of debt securities held by institutional units, such as information on collateral, credit ratings, or interest rate fixation periods.

Issuance and Holdings of Equity Securities by Sector and Subsector

7.18 It is important from the perspective of monetary and fiscal policy to analyze issuance and holdings of equity securities by sector and subsector, as well as holdings by nonresidents. This may also be of interest for the purposes of financial stability analysis.

7.19 Equity securities are issued by resident and nonresident corporations and can usually be held by any resident institutional sector or subsector or by nonresidents as part of their portfolio of financial assets. Nonfinancial corporations, financial corporations (in their capacity as institutional investors), households and general government can all hold equity securities. Specific attention is paid to nonresidents holding equity securities issued by residents.

Issuers of Equity Securities

7.20 Issuers of equity securities are:

- Resident financial and nonfinancial corporations
- Nonresident financial and nonfinancial corporations
- General government (in exceptional cases where public corporations are classified as part of general government).

7.21 Public corporations are corporations that operate under the control of general government. An assessment of their activities and resources is necessary in order to determine the appropriate classification—that is, whether they belong to the corporations sectors or (more exceptionally) the general government sector.⁵

7.22 The following types of financial corporation issue shares:

- The central bank⁶
- Deposit-taking corporations, except the central bank
- Insurance corporations
- Pension funds⁷
- Other financial corporations.

Holders of Equity Securities

7.23 Control or influence may be achieved either directly, by holding equity that gives voting rights in the relevant corporation, or indirectly, by having voting rights in another corporation that has voting rights in the first one.

7.24 Both financial and nonfinancial corporations may hold equity securities.

7.25 The equity securities holdings of the financial corporations sector can be broken down into the holdings of:

- The central bank
- Other money-issuing corporations, comprising deposit-taking corporations except the central bank and MMFs

⁵The basis on which production is undertaken is fundamental to the distinction between corporations and government. Corporations produce for the market and aim to sell their products at economically significant prices (2008 SNA, paragraph 4.18). In order to decide whether a public corporation is a market entity charging economically significant prices, various criteria are to be considered, such as whether it is a dedicated provider of ancillary services or simply a supplier of goods and services to government. It is also important to look at whether the corporation has an incentive to adjust supply in order to undertake a viable profit-making activity, operate in market conditions, and meet its financial obligations. The ability to undertake market activities will be checked, in particular, by means of the standard quantitative criterion: the ratio of sales to production costs. To be a market producer, it is expected that a public entity cover at least 50 percent of its costs by means of its sales over a sustained multiyear period (2008 SNA, paragraph 22.29). Otherwise, it should be classified as part of general government.

⁶Some central banks issue equity securities.

⁷Only a few countries allow pension funds to issue shares.

- Non-MMF investment funds
- Insurance corporations
- Pension funds
- Other financial corporations.

7.26 From the perspective of monetary policy and financial stability analysis, it may also be useful to provide data on institutional investors, who are important holders of equity securities. Institutional investors are generally understood to comprise a specific subset of financial corporations, namely:

- Non-MMF investment funds
- Insurance corporations
- Pension funds.

7.27 Households are important holders of the various types of equity security (as well as investment fund shares or units).

7.28 NPISHs generally hold fairly small amounts of equity securities.

7.29 In some countries, trusts or foundations classified as NPISHs are organized in such a way that allows households to transfer, for tax reasons, a large percentage of their equity securities to those institutions. Households often receive the proceeds of these trusts or foundations (depending on their statutes), but do not own them and cease to have a claim on the “donated” assets once they have been transferred.

7.30 Equity securities held by general government may include equity injections in public corporations or portfolio investment, as well as the proceeds of privatization or super dividends (see Box 5.5).

7.31 Government units such as social security funds conduct portfolio investment, mainly by purchasing listed shares on the market. Many countries have created sovereign wealth funds for the purpose of saving and investing excess revenue, often from primary product exports. These funds employ a range of investment strategies, including investment in foreign financial assets (e.g., portfolio investment in equity securities).

7.32 Public corporations’ distribution to their owners of surpluses in excess of operational profits (excluding holding gains or losses) is recorded as financial transactions. This represents the withdrawal of equity akin to a partial liquidation of the enterprise, rather than government revenue.

7.33 Nonresidents, as holders of equity securities, may be broken down by institutional sector or (in the case of financial corporations) subsector. They can also be broken down by country or into groups of countries.

7.34 Identifying nonresident holdings at the level of institutional sectors is, however, challenging (see Annex 6 on the Coordinated Portfolio Investment Survey [CPIS]).

7.35 Data on holdings of equity securities may also be broken down by country and/or area (a number of international organizations use these breakdowns for financial statistics).

Classification by Interest Rate

7.36 Only debt securities can be classified by interest rate, since equity securities do not accrue interest, but pay dividends. From a financial stability perspective, institutional units that issue a large share of debt securities with a variable interest rate may be exposed to more financial stress during periods of financial shocks. Furthermore, the operation of the monetary policy transmission mechanism may be influenced by the mix of fixed and variable interest rate debt securities. For example, if a large proportion of outstanding debt securities has a variable interest rate coupon, movements in market interest rates driven by changes to official interest rates can potentially make the impact of monetary policy more potent.

Fixed Interest Rate Debt Securities

7.37 For fixed interest rate debt securities, the contractual nominal coupon payments are fixed in terms of the currency of denomination for the life of the debt security, or for a certain number of years. Therefore, both the issuer and the holder know, at the date of issue, the timing and value of the coupon payments and principal repayments. The main features of such debt securities, as listed in the first column of Table 7.1, are described as common examples of “plain” fixed interest rate debt securities.

7.38 Fixed interest rate debt securities include those described below:

- Plain debt securities are issued and redeemed at face value.⁸
- Debt securities issued at a discount to their face value, with the exception of zero-coupon bonds

(see below), and that usually pay no coupon. For example, Treasury bills, commercial paper, promissory notes, bill acceptances, and bill endorsements.

- Deep discounted bonds have small coupon payments and are issued at a discount to face value.
- Zero-coupon bonds are single-payment debt securities with no coupon payments. The bond is sold at a discount to its face value and the principal is repaid at maturity. Zero-coupon bonds may be created from fixed interest rate debt securities by “stripping off” the coupons, that is, by separating the coupons from the final principal payment of the security and trading them independently.
- Separate trading of registered interest and principal of securities (STRIPS), or stripped debt securities, are securities that have been transformed from a principal amount with periodic interest coupons into a series of zero-coupon bonds, whose range of maturities matches the coupon payment dates and the redemption date of the principal amount.
- Perpetual with a fixed interest rate, callable (redeemable) and puttable debt securities, and debt securities with a sinking fund provision.
- Convertible bonds, usually classified as fixed interest rate debt securities, may, at the option of the issuer (or the holder), be converted into the equity of the issuer, at which point they are classified as equity securities.
- Exchangeable bonds are usually fixed interest rate securities with an embedded option allowing them to be exchanged for equity securities in a corporation other than the issuer (usually a subsidiary or company in which the issuer owns a stake) at some future date and under agreed-upon conditions.
- Debt securities paying interest linked to the credit rating of another borrower should be classified as fixed interest rate debt securities, as credit ratings do not change continuously in response to market conditions (*BPM6*, paragraph 5.111).

7.39 Fixed interest rate debt securities may also include some financial instruments whose classification is a

⁸ Face value is also known as par value, or simply par.

Table 7.1 Fixed Interest Rate Debt Securities

Feature	Type of debt security										
	Plain	Issued at discount or premium	Deep discount	Zero coupon	STRIPS	Perpetual	Callable puttable	Sinking fund provision	Convertible	Exchangeable	Linked to credit rating
Issue date	Fixed	Fixed	Fixed	Fixed	Various	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
Issue price	100	<100 or >100	<<100	<<100	<<100	Generally 100	<100 or >100	<100 or >100	<100 or >100	<100 or >100	<100 or >100
Redemption date	Fixed	Fixed	Fixed	Fixed	Fixed	Indefinite	Variable	Various	Fixed	Fixed	Fixed
Redemption price	100	100	100	100	100	--	100	Variable	100	100	100
Coupon payments	Fixed	Fixed	Fixed	--	--	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
Coupon payment dates	Fixed	Fixed	Fixed	--	--	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
Interest included in ¹	C	C & P	C & P	P	P	C	C & P	C & P	C & P	C & P	C & P
Change into equity securities	--	--	--	--	--	--	--	--	Other corporation	--	--

Note: "--" represents not applicable.

¹ Interest included in principal payments (P); interest included in coupon payments (C).

borderline between debt securities and other negotiable financial instruments.

- Equity warrant bonds are debt securities that incorporate warrants giving the holder the option to purchase equity in the issuer or another company during a predetermined period, or at a particular date, and at a fixed contract price. The exercise of the equity warrant will usually increase the total funding of the issuer because the debt is not replaced by equity, but remains outstanding until the date it is redeemed.⁹ The warrant may be detachable and traded separately from the debt security. As a result, two separate financial instruments can be presented—the warrant, as a financial derivative, and the bond, as a debt security.
- Subordinated bonds have a lower priority than the issuer's other bonds in the event of liquidation. The terms of issue of some debt securities require them to be repaid before subordinated debt in the event of liquidation. Subordinated debt securities are therefore riskier for the holder. Subordinated bonds usually have a lower credit rating than the debt securities that are repayable in priority.
- Stapled instruments—which, under their terms of issue, are two or more different financial instruments (for example, ordinary equity securities and unsecured notes) coupled together for certain purposes—are usually treated separately as fixed interest rate debt securities and equity securities. However, stapled instruments usually cannot be transferred separately either in the market or as the result of an over-the-counter (OTC) transaction. A parcel consisting of one equity security and one or more notes is traded in the market as though it were a single security, although conceptually the components are regarded as separate. If the components cannot be separately identified, the stapled instrument should be classified according to the predominant component, that is, either as a debt security or an equity security.

⁹Equity warrant bonds may also be issued as variable interest rate convertible bonds. This also applies for convertible and exchangeable bonds.

Variable Interest Rate Debt Securities

7.40 Variable interest rate debt securities have their coupon or principal payments (or both) linked to a general price index for goods and services (such as the consumer price index (CPI)), interest rate (such as the London interbank offered rate (LIBOR) or a bond yield), or asset price. The reference value fluctuates in response to market conditions. Table 7.2 presents the main features of the different types of variable interest rate debt security, with a breakdown into three sub-categories: inflation-linked, interest rate-linked, and asset price-linked.

7.41 Variable interest rate debt securities include those issued as inflation-linked bonds and as asset price-linked bonds. The redemption value of an asset price-linked bond includes those linked to the price of a commodity.

7.42 In the case of interest rate-linked debt securities, the contractual nominal coupon payments are variable and are revised periodically according to the reference interest rate. Therefore, neither the issuer nor the holder can be certain, at the date of issue, of the timing and value of coupon payments.

7.43 A specific type of interest rate-linked debt security is a variable rate note (VRN). These notes have the standard characteristics of a variable interest rate bond. However, whereas a variable interest rate bond has a fixed spread over a reference index, the spread over the reference interest rate on a VRN varies over time, depending on the change in the perceived credit risk of the issue or issuer. VRNs generally have a put option for the existing holders of notes to sell the issue back to the lead manager of the issuing syndicate at face value and at any interest payment date.

Mixed Interest Rate Debt Securities

7.44 Mixed interest rate debt securities have both a fixed and variable coupon over their life and are classified as variable interest rate debt securities. They cover debt securities that have:

- A fixed coupon and a variable coupon at the same time
- A fixed (or a variable) coupon until a reference point, and then a variable (or a fixed) coupon from that reference point to the maturity date

Table 7.2 Variable Interest Rate Debt Securities

Feature	Type of debt security						Interest rate-linked
	Index-linked						
	Inflation-linked			Asset price-linked			
	Coupon only	Principal only	Coupon and Principal	Coupon only	Principal only	Coupon and Principal	
Issue date	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
Issue price	<100 or >100	<100 or >100	<100 or >100	<100 or >100	<100 or >100	<100 or >100	<100 or >100
Redemption date	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
Principal payments ¹	Fixed	Variable	Variable	Fixed	Variable	Variable	Fixed
Coupon payments	Variable	Fixed	Variable	Variable	Fixed	Variable	Variable
Coupon payment dates	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
Interest included in ²	C	C & P	C & P	C	C & P	C & P	C variable

¹Principal payments are equivalent to the redemption price.

²Interest included in coupon payments (C); interest included in principal payments (P).

- Coupon payments that are prefixed over the life of the debt security but are not constant over time. They are called stepped debt securities.

Classification by Maturity

Short-term and Long-term Maturity

7.45 Debt securities can be classified as having short- or long-term maturity. A debt security with a short-term maturity is defined as one that is payable on demand¹⁰ or in one year or less. A debt security with a long-term maturity is defined as one that is payable in more than one year or that has no stated maturity (*BPM6*, paragraph 5.103).

7.46 It is also possible to break down statistics on long-term debt securities into four sub-items:

- More than one year and up to and including two years
- More than two years and up to and including five years
- More than five years and up to and including ten years
- More than ten years.

¹⁰Payable on demand refers to a demand for payment issued by the creditor.

Deciding on the Maturity Concept for Debt Securities Issues

7.47 When deciding whether debt securities should be recorded on an original or remaining maturity basis, it is important to consider the duration concept. Duration is the weighted average term to maturity of a debt security. It can be used to measure the impact on the value of a debt security that will result from a one percentage point change in interest rates. Unlike maturity, duration takes into account interest payments that occur throughout the life of the debt security. De facto, duration is a weighted average payment schedule.

7.48 The original maturity concept is helpful in understanding issuance activity. For example, it is important to understand whether institutional units are borrowing in the short or long-term, and how the pattern is changing. Most countries present debt securities statistics based on this concept.

7.49 For the analysis of debt positions and debt servicing capacity, data recorded on a remaining maturity basis may be preferred, since the concept is more closely related to duration. Given the tendency for debt securities with the same duration to have a similar yield, any differences in value are then due to the credit risk of the borrower, market liquidity, etc. Data

recorded on a remaining maturity basis are also particularly helpful for liquidity analysis.

7.50 Recording debt securities on a remaining maturity basis is recommended in this *Handbook* for long-term debt securities with a remaining maturity of one year or less, that is, the second item in paragraph 7.51. All other data should be presented on an original maturity basis. In other words, as both original and remaining maturity measures have analytical interest, the *Handbook* encourages debt securities statistics to be presented for the three splits listed below.

7.51 Statistics on debt securities issues can combine measures in both original and remaining maturity terms accommodated by the following split:

- Short-term on an original maturity basis
- Long-term on an original maturity basis that will mature in one year or less
- Long-term on an original maturity basis that will mature in more than one year.

7.52 The first two items can be combined to derive debt securities due within one year, that is, short-term debt securities on a remaining maturity basis. Alternatively, the second and third items can be combined to derive long-term debt securities on an original maturity basis.

Classification by Currency

7.53 The issue price, redemption price, and coupon may be denominated (or settled) in either domestic currency or foreign currencies. Hence, data on debt securities issues can be classified according to whether issues are denominated in domestic currency or foreign currencies. These data can be aggregated to show debt securities issued in all currencies.

Currency of Denomination

7.54 The currency of denomination is determined by the currency in which the value of positions and flows for debt securities are fixed, as specified in the contract between the institutional units. Accordingly, all cash flows are determined using the currency of denomination and, if necessary, converted into the domestic currency for the purpose of settlement. The currency of denomination is important for distinguishing transactions and revaluations (*BPM6*, paragraph 3.98).

7.55 Debt securities can be denominated in domestic currency or foreign currencies. A further breakdown of debt securities denominated in several foreign currencies may be appropriate and may vary depending on the relative importance of the individual foreign currencies to a national economy or a monetary or economic union.

7.56 Debt securities with both their principal and coupon linked to a foreign currency are classified as though they are denominated in that foreign currency (*BPM6*, paragraph 11.50 (b)).

Currency of Settlement

7.57 The currency of settlement may be different from the currency of denomination. The currency of settlement refers to the currency into which the value of positions and flows for debt securities are converted each time settlement occurs (*BPM6*, paragraph 3.99).

Classification by Market

7.58 Statistics on debt securities issues can be classified by market. The classification allows an understanding of the relative importance of debt securities issues by different resident sectors and nonresidents across markets. It can also facilitate analysis of the relative attractiveness of the domestic debt securities market compared with international markets, and the impact of structural changes in debt securities markets, such as deregulation, consolidation, and financial innovation. In the absence of information on the currency denomination of debt securities, data on securities issued in international markets can provide a broad indication of the domestic versus foreign currency composition of debt securities issues.

7.59 Statistics on debt securities issues can be classified according to the markets where these securities are issued—domestic or international (or both)—that would be reflected in statistics covering all markets. This classification is particularly important for emerging market economies, where connections between the two markets are in their early stages. While institutional units that are resident in emerging market economies usually issue debt securities in their domestic market, they do not always have access to international markets. The liberalization of the financial markets of these economies makes them more attractive to foreign investors and allows resident

units to issue securities in international markets. This encourages inflows of foreign capital, reduces the cost of borrowing for domestic institutional units, and promotes economic growth. Nonresident units may issue debt securities in emerging market economies, if they are permitted.

7.60 As financial markets become more open to foreign issuers and investors, the boundaries between domestic and international securities markets become less clear. This is particularly the case for institutional units that are resident in industrialized economies. They can usually raise funds by issuing debt securities in their domestic market or international markets (or both), which would be reflected in statistics covering all markets. At the same time, nonresident institutional units can issue debt securities in the domestic market. In these cases, the borderline between domestic and international markets is becoming less clear.

7.61 The presentation of statistics on debt securities issues classified by market will depend on the two approaches described in Chapter 1. The guidelines presented below are based on the *External Debt Statistics Guide*, paragraph 6.21:

- In the “residence of issuer” approach, debt securities issued by a resident of the same economy in which the security is issued are classified as domestically issued, regardless of the currency of issue. All other issues are classified as internationally issued.
- In the “location of issue” approach, all debt securities issued in that economy either by residents or nonresidents are classified as domestic market issues, regardless of the currency of issue. In this approach, debt securities issued in international markets are excluded by definition.¹¹

7.62 If there is uncertainty over the market of issue, the three criteria stated below should be used in descending order of preference to determine whether a resident of an economy has issued a domestic or an international debt security (*External Debt Statistics Guide*, paragraph 6.21).

- The debt security is listed on a recognized exchange in the domestic economy (domestic issue) or in a foreign economy (international security).
- The debt security has an International Securities Identification Number (ISIN) with a country code the same as the legal domicile of the issuer, and/or is allocated a domestic security code by the domestic national numbering agency (domestic security). Alternatively, the debt security has an ISIN with a country code different from the one for the country where the issuer is legally domiciled and/or has an international security code issued by a foreign national numbering agency (international security).
- The security is issued in the domestic currency (domestic issue) or in a foreign currency (international issue).

Classification by Default Risk

7.63 A qualitative feature of debt securities is the default risk attached to them. Given the relevance of default risk for monetary policy and financial stability analysis, this *Handbook* outlines some important points on the possibility of classifying debt securities issues by default risk. Various methods include the use of external ratings and reference yield curves. However, this section does not provide a scheme for classifying debt securities issues by default risk as further work is needed in this area.

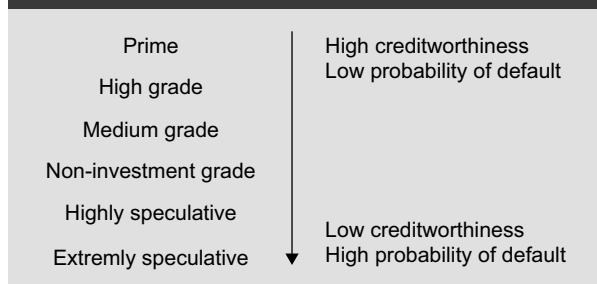
Debt Securities Ratings as Provided by Credit Rating Agencies

7.64 External ratings by credit rating agencies assess the creditworthiness of an issuer with regard to its financial obligations. They provide holders of debt securities, as well as market analysts, with an indication of the issuer’s overall financial capacity and willingness to make scheduled coupon payments and principal repayments on a specific issue.

7.65 External ratings are determined by specialized national and international agencies based on risk analyses and ratings tools developed by the agencies themselves. The ratings tools all use an alphabetical, ordinal structure to rate debt securities issues, although some agencies also use an alphanumeric grading scale. Their credit quality designations cover a range from high, through medium to low, which

¹¹ Where debt securities are issued in multiple markets, the presentation will depend on whether the “residence of issuer” or the “location of issue” approach is used, as well as the legal arrangements applying to the debt securities issue.

Figure 7.1 Typical External Ratings Used by Credit Rating Agencies for Debt Securities



corresponds respectively to a low, medium, and high probability of default (see Figure 7.1).

7.66 Aggregate data on debt securities issues containing information on credit ratings are valuable for a number of reasons. First, they can assist policymakers and analysts to identify and focus on the sectors (or subsectors) containing the institutional units issuing the riskiest debt securities. Second, they also help to identify the riskiest types of debt security with a further breakdown by subcategories or subpositions. These are essential for identifying possible contagion effects from default, with consequences for market liquidity and solvency, and transmission mechanism effects to the real economy. Third, they support financial investment decisions to the extent they provide some transparency for creditors and debtors, and promote the efficient operation of the debt securities market. Fourth, data with ratings information provide a measure of the state of development of domestic and international securities markets in terms of their capacity to accommodate issuers with different credit standings.

7.67 Security-by-security (SBS) databases may contribute to an analysis of discrepancies in the multiple credit ratings across agencies and tracking their changes. However, there are challenges with regard to reconciling these differences and developing aggregate data, such as determining appropriate weights. Furthermore, future regulatory changes may affect the governance of existing credit rating agencies and the possible development of new credit ratings.

Reference Yield Curves

7.68 An alternative method for comparing and classifying the default risk of debt securities issuers is to use reference yield curves. These yield curves are a tool with which information can be derived on the default risk structure of debt securities at remaining maturity. Debt securities that have a high credit quality are those securities with the lowest yield within homogenous classes of debt securities (currency, maturity, etc.). For example, the default risk of central government debt securities provides a benchmark for non-general government debt securities, since the former securities are considered to be the least risky issues. This is usually reflected in yield spreads between the respective debt issues, nationally as well as across countries.

7.69 Yield spreads may therefore be indicative of the relative creditworthiness of individual issues. This could be used to develop a statistical classification scheme for debt securities by default risk. For example, the lowest decile, or a lowest first percentile, could be used to define high credit quality debt securities. Again, SBS databases could facilitate the development of such yield curves and deciles.¹²

Classification

7.70 Apart from external ratings and reference yield curves, other methods may be used to develop a scheme for classifying debt securities by default risk. The ranking of debt securities on the basis of reference yield curves could be compared or combined with the credit ratings applied to debt securities by rating agencies. Unlike the criteria for determining residence, institutional sector and subsector, maturity, currency, interest rate, and market, the *Handbook* does not provide a classification scheme for default risk. Further work is needed in this area. In particular, it will be necessary to identify whether it is indeed possible to develop a conceptually sound classification scheme for debt securities based on default risk.

¹²In statistics, a decile is any of the nine values that divide the sorted data into ten equal parts, so that each part represents one-tenth of the sample or population. Thus, the first decile cuts off the lowest 10 percent of data.



8

Issuance and Holdings of Securities in a “From-Whom-to-Whom” Framework

The “From-Whom-to-Whom” Framework

8.1 A “from-whom-to-whom” framework allows a detailed presentation of financing and financial investment via securities (debt and equity securities), which has a number of benefits. From a broader perspective, it allows the analysis not only of relationships between institutional sectors and subsectors within an economy, but also of relationships between these sectors/subsectors and nonresidents (which can, in turn, be broken down by country or sector). Such an analysis sheds light on the sectoral composition of assets and liabilities, potential strengths and vulnerabilities in portfolios, interconnectedness, and potential spillovers.

8.2 A “from-whom-to-whom” framework allows users to see who is financing whom, to what extent, with what type of security, and so on. It may also indicate, for example, the resident sectors on which the securities held by households or nonresidents represent claims.

- From the perspective of issuers of debt securities, the framework may allow users to see the amount of securities issued by general government and held by households, financial corporations (and their subsectors), or nonresidents.
- From the perspective of issuers of equity securities, the framework may allow users to see the amount of equity securities issued by nonfinancial corporations and held by households or financial corporations (and their subsectors), as well as of equity securities issued by resident corporations and held by nonresidents.

8.3 The presentation of debt or equity securities holdings in a “from-whom-to-whom” framework, or broken down by debtor/creditor,¹ extends the presentation of unconsolidated securities issuance or holdings without any counterpart sector or residence information, as outlined in Chapter 1.

8.4 Table 1.5 in Chapter 1 shows breakdowns by issuing sector of positions (or, in the case of transactions, net issuance) in respect to debt and equity securities (i.e., showing the sectors on which these financial instruments represent claims) and a breakdown by holding sector of positions or transactions in respect to debt and equity securities (i.e., showing the sectors acquiring securities). This presentation provides information on the relationships between issuers and holders and is, therefore, consistent with a “from-whom-to-whom” framework.

8.5 For each type of debt or equity security (whether in terms of positions or flows), a “from-whom-to-whom” framework has two dimensions:

- Residence, sector, or subsector of the issuer
- Residence, sector, or subsector of the holder.

8.6 A “from-whom-to-whom” framework requires three-dimensional tables providing breakdowns for the security, the issuer, and the holder.² Such tables show positions, transactions, revaluations and other changes in the volume of assets and liabilities, broken down by the sector of the issuer and of the holder, respectively.

¹The 2008 SNA uses the term “flow of funds” (see Chapter 27 of the 2008 SNA).

²The time series aspect of the “from-whom-to-whom” framework may be seen as a fourth dimension.

Table 8.1 “From-Whom-to-Whom” Financial Transactions in Debt Securities, Unconsolidated

Issuer by residence and by resident sector		Residents					Nonresidents	All holders
		NFCs	FCs	GG	HHs and NPISHs	All residents		
Residents	Nonfinancial corporations	30	23	5	65	123	24	147
	Financial corporations	11	22	2	43	78	28	106
	General government	67	25	6	124	222	54	276
	Households and NPISHs	–	–	–	–	–	–	–
	All residents	108	70	13	232	423	106	529
Nonresidents		34	12	19	43	108		
All issuers		142	82	32	275	531		

Note: NFCs = nonfinancial corporations; FCs = financial corporations; GG = general government; HHs = households; NPISHs = nonprofit institutions serving households.

“From-Whom-to-Whom” Transactions in Debt Securities

8.7 Table 8.1 is a “from-whom-to-whom” presentation for transactions in debt securities. It is the same type of table as Table 1.5 in Chapter 1. It shows, for example, in its fourth column that households and nonprofit institutions serving households (NPISHs) acquired (net of disposals) debt securities for 275; this acquisition reflects an increase in their claims on nonfinancial corporations (65), financial corporations (43), general government (124), and the rest of the world (43).

8.8 Table 8.1 indicates that, for example, as a result of transactions in the reference period, nonfinancial corporations issued (net of redemptions) debt securities for 147, as reflected in the first row. Their liabilities in this form to other nonfinancial corporations increased by 30, to financial corporations by 23, to general government by 5, to households and NPISHs by 65, and to the rest of the world by 24. Conversely, households and NPISHs issued no debt securities.

8.9 Table 8.1 also presents intra sectoral transactions of resident sectors in debt securities (the diagonal cells). For example, nonfinancial corporations issued debt securities for 30 that are being held by other institutional units of the same sector. These transactions are not included when intra sectoral transactions are consolidated. If the transactions are consolidated for each resident sector, the table would then show only the transactions between the various resident sectors and between those sectors and the rest of the world, but not the transactions within the same resident sectors.³

8.10 Transactions in debt securities held by residents and issued by nonresidents are reflected in the “nonresidents” row (108). Transactions in debt securities held by nonresidents and issued by residents are shown in the “nonresidents” column (106). Transactions in debt securities held by nonresidents and issued by nonresidents are not covered (black cell).

³Totals by issuer refer to issues and redemptions only; totals by holder refer to issues, redemptions, and transactions, in the secondary market.

Table 8.2 "From-Whom-to-Whom" Financial Transactions in Debt Securities, in a Time Series Format

Transaction	t	t + 1	...	t + n
Net acquisition of debt securities by				
Nonfinancial corporations				
Issued by				
Nonfinancial corporations	30			
Financial corporations	11			
General government	67			
Households and NPISHs	-			
All residents	108			
Nonresidents	34			
All issuers	142			
Financial corporations				
Issued by				
Nonfinancial corporations	23			
Financial corporations	22			
General government	25			
Households and NPISHs	-			
All residents	70			
Nonresidents	12			
All issuers	82			
General government				
Issued by				
Nonfinancial corporations	5			
Financial corporations	2			
General government	6			
Households and NPISHs	-			
All residents	13			
Nonresidents	19			
All issuers	32			
Households and NPISHs				
Issued by				
Nonfinancial corporations	65			
Financial corporations	43			
General government	124			
Households and NPISHs	-			
All residents	232			
Nonresidents	43			
All issuers	275			
All residents				
Issued by				
Nonfinancial corporations	123			
Financial corporations	78			
General government	222			
Households and NPISHs	-			
All residents	423			
Nonresidents	108			
All issuers	531			
Nonresidents				
Issued by				
Nonfinancial corporations	24			
Financial corporations	28			
General government	54			
Households and NPISHs	-			
All residents (=all issuers)	106			
All holders				
Issued by				
Nonfinancial corporations	147			
Financial corporations	106			
General government	276			
Households and NPISHs	-			
All residents	529			

8.11 Table 8.1 also shows that, by definition, the sum of transactions in debt securities held by residents (*vis-à-vis* resident and nonresident issuers) (531) and by nonresidents (*vis-à-vis* resident issuers) (106) is equal to the sum of transactions in debt securities issued by residents (*vis-à-vis* resident and nonresident holders) (529) and by nonresidents (*vis-à-vis* resident holders) (108). The total amount is 637. Table 8.2 presents Table 8.1 in a time series format.

8.12 Similar tables can be compiled for positions, revaluations, and other changes in the volume of assets and liabilities.

8.13 The complexity of “from-whom-to-whom” tables for debt securities is determined by the detail of the breakdowns chosen for debt securities (i.e., whether they are broken down by subcategory, position, or subposition) and for the creditors and debtors (i.e., whether they are broken down by residence, sector, or subsector).

8.14 Combining these breakdowns leads to a substantial number of “from-whom-to-whom” relationships, especially as the data may need to be shown as both positions and flows. Accordingly, a selection by debt security subcategory, sector, or subsector is essential.

“From-Whom-to-Whom” Transactions in Equity Securities

8.15 Table 8.3 is a “from-whom-to-whom” presentation for transactions in equity securities. It is the same type of table as Table 1.5 in Chapter 1. It shows, for example, in its fourth column that households and NPISHs acquired (net of disposals) 151 units of equity securities. This acquisition reflects increases in their claims on nonfinancial corporations (65 units), financial corporations (43 units), and the rest of the world (43 units). Net acquisition refers to the acquisition of newly issued securities (net of redemptions) plus acquisitions (net of disposals) on secondary markets.

8.16 Table 8.3 indicates, for example, that transactions in the reference period resulted in nonfinancial corporations issuing (net of redemptions) 147 units of equity securities, as reflected in the first row. Their liabilities to other nonfinancial corporations increased by 30, while liabilities to financial corporations increased by 23, liabilities to general government increased by 5, liabilities to households and NPISHs increased by 65, and liabilities to the rest of the world increased by 24. Conversely, households and NPISHs issued no equity securities.

Table 8.3 “From-Whom-to-Whom” Financial Transactions in Equity Securities, Unconsolidated

Issuers		Holders		Residents					Nonresidents	All holders
		NFCs	FCs	GG	HH and NPISHs	All residents				
Residents	Nonfinancial corporations	30	23	5	65	123	24	147		
	Financial corporations	11	22	2	43	78	28	106		
	General government	–	–	–	–	–	–	–		
	All residents	41	45	7	108	201	52	253		
Nonresidents		34	12	2	43	91				
All issuers		75	57	9	151	292				

Note: NFCs = nonfinancial corporations; FCs = financial corporations; GG = general government; HH = households; NPISHs = nonprofit institutions serving households.

Table 8.4 "From-Whom-to-Whom" Financial Transactions in Equity Securities, in a Time Series Format				
Transaction	t	$t + 1$...	$t + n$
<i>Net acquisition of equity securities by</i>				
Nonfinancial corporations				
Issued by				
Nonfinancial corporations	30			
Financial corporations	11			
General government	-			
All residents	41			
Nonresidents	34			
All issuers	75			
Financial corporations				
Issued by				
Nonfinancial corporations	23			
Financial corporations	22			
General government	-			
All residents	45			
Nonresidents	12			
All issuers	57			
General government				
Issued by				
Nonfinancial corporations	5			
Financial corporations	2			
General government	-			
All residents	7			
Nonresidents	2			
All issuers	9			
Households and NPISHs				
Issued by				
Nonfinancial corporations	65			
Financial corporations	43			
General government	-			
All residents	108			
Nonresidents	43			
All issuers	151			
All residents				
Issued by				
Nonfinancial corporations	123			
Financial corporations	78			
General government	-			
All residents	201			
Nonresidents	91			
All issuers	292			
Nonresidents				
Issued by				
Nonfinancial corporations	24			
Financial corporations	28			
General government	-			
All residents (= all issuers)	52			
All holders				
Issued by				
Nonfinancial corporations	147			
Financial corporations	106			
General government	-			
All residents	253			

8.17 Table 8.3 also presents intra sectoral transactions in equity securities holdings for resident sectors (the diagonal cells with borders). For instance, nonfinancial corporations issued 30 of equity securities that are being held by other institutional units in the same sector. These transactions are not included when intra sectoral transactions are consolidated. If the transactions were consolidated for each resident sector, the table would then show only the transactions between the various resident sectors and between those sectors and the rest of the world, but not the transactions within a given resident sector.

8.18 Transactions in equity securities held by residents and issued by nonresidents are reflected in the “nonresidents” row (91). Transactions in equity securities held by nonresidents and issued by residents are shown in the “nonresidents” column (52). Transactions in equity securities held by nonresidents and issued by nonresidents are not covered (black cell).

8.19 Table 8.3 also shows that, by definition, the sum of transactions in equity securities held by residents (and issued by residents and nonresidents) (292) and by nonresidents (and issued by residents) (52) is equal to the sum of transactions in equity securities issued by residents (and held by residents and nonresidents) (253) and by nonresidents (and held by residents) (91). In both cases, the total amount is 344. Table 8.4 presents Table 8.3 in a time series format.

8.20 Similar tables can be compiled for positions, revaluations, and other changes in the volume of assets and liabilities.

8.21 The complexity of “from-whom-to-whom” tables for equity securities is determined by the breakdowns chosen for the financial instruments (i.e., whether they are broken down by category, position, or subposition) and for the issuers and holders (i.e., whether they are broken down by residence, sector, or subsector).

8.22 Combining these breakdowns leads to a substantial number of “from-whom-to-whom” relationships, especially as the data may need to be shown as both positions and flows. Accordingly, a selection by equity security category, position, or subposition is essential.

The Transactor Principle Versus the Issuer/Holder Principle

8.23 A distinction can be drawn between two types of transactions in securities. The first type, the issuance and redemption of securities, involves only the issuer and one holder. The second type, transactions on secondary markets, involves three institutional units: the two holders exchanging the equity security (i.e., the original, or “old,” holder and the ultimate, or “new,” holder) and the institutional unit that issued it. Sometimes, as in the case of the assumption of a debt, the three institutional units may be two debtors and a creditor.

8.24 The fact that three parties are involved needs to be reflected in the recording of secondary market transactions in a “from-whom-to-whom” approach, because the position between the issuer and the seller (the “old” holder) and the position between the issuer and the buyer (the “new” holder) change.

8.25 A financial transaction between two institutional units—involving, for example, the transfer of ownership of a security from institutional unit A (the “old” holder) to institutional unit B (the “new” holder), where B is in a different sector/subsector from A—may therefore be recorded in two different ways.

- It could be recorded by means of a reclassification entry in the issuer’s “other changes in the volume of assets” account, reflecting the fact that the holder is now in a different sector. With this approach, the secondary market transaction is recorded in the accounts as a single transaction, accompanied by a reclassification adjustment.
- However, it could also be recorded as the extinguishing of holder A’s claim against the issuer and the creation of holder B’s claim against the issuer. With this approach, the secondary market transaction is recorded as two transactions.

8.26 The first approach focuses on the contract between the holders (the “transactor principle”), while the second approach focuses on the contract between the issuer and the holder (the “issuer/holder,” or “debtor/creditor,” principle”).

The Transactor Principle

8.27 The transactor principle captures the change in ownership of a financial asset (or the change of

Table 8.5 Recording a Household’s Acquisition of Shares from a Financial Corporation in Accordance with the Transactor Principle

Financial assets	Liabilities	Financial assets	Liabilities
Households		Nonfinancial corporations	
– Currency			+ Other changes in liabilities vis-à-vis households
+ Shares			
Financial corporations			– Other changes in liabilities vis-à-vis financial corporations
+ Currency			
– Shares			

debtors in the case of the assumption of a debt) in the accounts of the transactors involved, but not in the accounts of the debtor (or of the creditor where one institutional unit takes on the liability of another).

8.28 Thus, under the transactor principle, a change in the ownership of a security is recorded without taking the involvement of the issuer into consideration. For example, when a household buys, from a financial corporation, a share issued by a nonfinancial corporation, the transactor principle results in a single transaction being recorded, as shown in Table 8.5 (i.e., the transaction between the financial corporation and the household), without the change of ownership being reflected in the accounts of the nonfinancial corporation that issued the share.

8.29 To reflect the change in the holder’s counterpart sector in the accounts of the issuing nonfinancial corporation, the reclassification of the holder is recorded in the issuer’s “other changes in the volume of assets” account. The numerous secondary market transactions in shares would necessitate many such reclassifications.

8.30 Applying the transactor principle requires data on individual transactions, including information on the:

- Transactors (i.e., holders A and B)
- Type and value of the security concerned
- Issuer.

8.31 The collection of data on individual transactions leads to a large amount of detailed statistical informa-

tion, in view of the fairly frequent trading of securities on any given day. Information on both transactors is available to custodians or stock exchanges.⁴ If no transaction data are available, only the positions of holders of securities can be identified. Accordingly, statistical collection systems do not usually provide detailed information on transactions, instead relying on position data.⁵

The Issuer/Holder or Debtor/Creditor Principle

8.32 The issuer/holder, or debtor/creditor, principle captures a transaction between two institutional units in the accounts of the two transactors, as well as allowing the change of holder to be recorded in the financial account of the issuer.

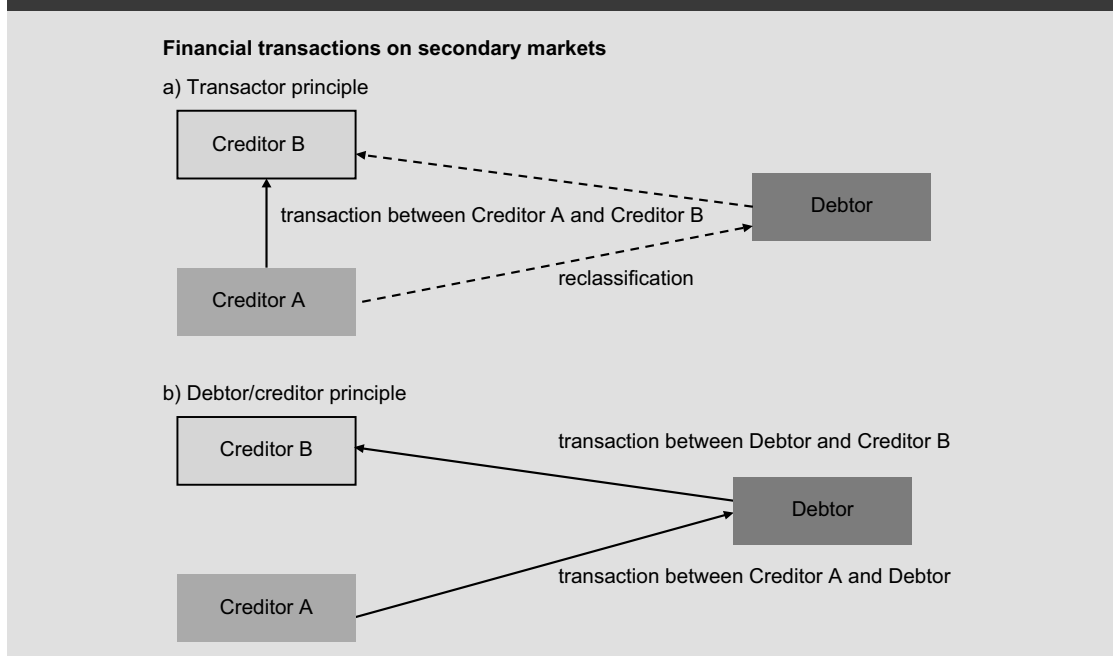
8.33 Thus, when the owner of a security changes, the issuer/holder principle records the two stages of the process as financial transactions. When a financial corporation sells a security issued by a nonfinancial corporation to a household, the financial account of the nonfinancial corporation records the issuance of a security to a household and a corresponding repayment to a financial corporation. Financial transactions involving the three institutional units are recorded as shown in Table 8.6.

⁴However, in many cases, the transactor approach results in data on transactions with brokers and other intermediaries, not transactions with the ultimate (or “new”) owners of the securities.

⁵Some economies do capture transaction data directly, usually on a net assets or liabilities basis, as requested in the *BPM6* for portfolio transactions. Capturing these data presents a challenge from a practical perspective.

Table 8.6 Recording a Household's Acquisition of Shares from a Financial Corporation in Accordance with the Issuer/Holder Principle

Financial assets	Liabilities	Financial assets	Liabilities
Households		Nonfinancial corporations	
- Currency		+ Currency	
+ Shares vis-à-vis nonfinancial corporations			+ Shares vis-à-vis households
Financial corporations			
+ Currency		- Currency	
- Shares vis-à-vis nonfinancial corporations			- Shares vis-à-vis financial corporations

Figure 8.1 The Transactor Principle and the Debtor/Creditor Principle

8.34 The sale of a security issued by a resident or nonresident institutional unit (the issuer) to another resident or nonresident institutional unit (the two holders) clearly meets the 2008 SNA's definition of a transaction (i.e., the exchange of economic value between willing participants). It cannot be construed as a reclassification, from either the buyer's or the seller's point of view.

8.35 Symmetry of treatment between holders of assets and issuers of liabilities would require that the issuer treat the event as a transaction (i.e., a redemption and,

simultaneously, the issuance of a new security, netting to zero net issuance).

8.36 The issuer/holder, or debtor/creditor, approach is further justified by the implicit or explicit conditions accepted by the issuer when creating a security. Where issuance requires the issuer to record the owners of securities in the issuer's liability register, the two holders will inform the issuer of the change in ownership and, by recording the event, the issuer acknowledges the secondary market transaction.

Box 8.1 Detailed Recording of Debt Securities Following the Debtor/Creditor Principle

Position data are usually available on the holder of debt securities (Creditor B) and on the debtor at a specific point in time, but not on the transactor from whom the debt securities were bought (Creditor A).

Transactions may then be derived, residually, as the difference in positions between the beginning and the end of a period, minus any other flows:

$$\text{Transactions}_t = \text{position}_t - \text{position}_{t-1} - \text{revaluations}_t - \text{other changes in volume}_t$$

Based on the information available on positions, this approach follows the debtor/creditor principle. This is demonstrated in the following table. It shows that Creditor B has positions_{t-1} in debt securities vis-à-vis Debtor 1 of 10 and vis-à-vis Debtor 2 of 20. These positions change to 12, vis-à-vis Debtor 1, and to 10, vis-à-vis Debtor 2, in t. It is assumed that no revaluations or other changes in volume have taken place in the period. Based on this assumption, the net acquisition of debt securities by Creditor B is +2 vis-à-vis Debtor 1 and -10 vis-à-vis Debtor 2.

Following the debtor/creditor principle, the net acquisition by Creditor B of debt securities vis-à-vis Debtor 1 (+2) is recorded as an acquisition of debt securities newly issued by Debtor 1. Symmetrically, Debtor 1 is deemed to have redeemed 2 of debt securities held by Creditor A.

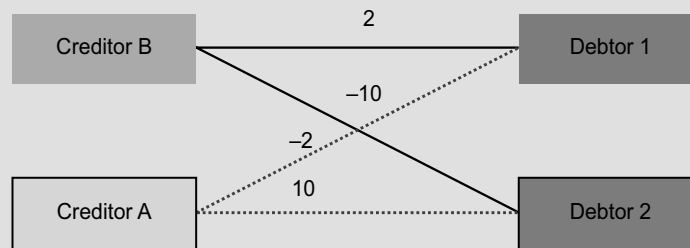
In parallel, the net acquisition of -10 must be recorded by Creditor B as a disposal, and as a redemption of debt securities by Debtor 2. A corresponding new issue of debt securities of 10 by Debtor 2 is deemed to have been bought by Creditor A. Note that in reality there are no transactions in the period between the debtor and the two creditors. Rather, four transactions (one between each debtor and each of the two creditors) are imputed—replacing the actual secondary market transactions in debt securities by the two holders. The effect is to preserve the link between the transaction data and the change in the "from-whom-to-whom" positions data.

The transactions to be recorded for this example following the debtor/creditor principle are illustrated in the following figure.

Table 8.1.1 Detailed Recording of Debt Securities Following the Debtor/Creditor Principle

		Creditor (holder)		
		Creditor A	Creditor B	Total
Debtor (issuer)				
Debtor 1	1. Position at end of previous period	5	10	15
	2. Net acquisition during current period	-2	2	0
	3. Revaluation during current period	-	-	-
	4. Other change in volume during current period	-	-	-
	5. Position at end of current period	3	12	15
Debtor 2	1. Position at end of previous period	15	20	35
	2. Net acquisition during current period	10	-10	0
	3. Revaluation during current period	-	-	-
	4. Other change in volume during current period	-	-	-
	5. Position at end of current period	25	10	35
Total	1. Position at end of previous period	20	30	50
	2. Net acquisition during current period	8	-8	0
	3. Revaluation during current period	-	-	-
	4. Other change in volume during current period	-	-	-
	5. Position at end of current period	28	22	50

(Continued)

Box 8.1 Detailed Recording of Debt Securities Following the Debtor/Creditor Principle (Continued)**Figure 8.1.1 Transactions According to the Debtor/Creditor Principle**

The set of information required to apply the debtor/creditor principle consists of: (1) a SBS database enabling each issuance of a debt security to be identified (information on the debtor and the initial creditor); and (2) a link between the SBS database and the appropriate securities holdings statistics, which keeps track of changes in the debt securities positions of creditors and includes information on the individual debtors.



9

Detailed Presentation Tables

9.1 This chapter refers to the following stylized detailed presentation tables:

- Type A presentation tables (Tables 1.2 and 1.3), which follow the “residence of issuer” approach
- Type B presentation tables (Table 1.4), which follow the “residence of holder” approach
- Type C presentation tables (Table 1.5), which follow the “from-whom-to-whom” approach
- Presentation tables with global aggregates for securities.

Type A Presentation Tables (the “Residence of Issuer” Approach)

Debt Securities Issues

9.2 The presentation tables on debt securities issues are described with different classifications. They are designed to capture a wide range of debt securities characteristics, although only a subset of the cells in the tables might be relevant for a particular economy depending on the volume and structure of its debt securities issues and the regulations governing issuance and trade in these financial instruments.

9.3 Five possible classifications are outlined to present statistics on debt securities issues: issuer, currency, maturity, interest rate, and market. Table 9.1, which is based on stylized presentation Table 1.2, presents these categories for debt securities issues. In addition to the five possible classifications, it shows the memorandum item “securitization debt securities.”

“Residence of issuer” approach and “location of issue” approach

9.4 Table 9.1 can be used to cross-classify statistics on debt securities issues following the “residence of issuer” and “location of issue” approaches. The

residence of issuer approach allows the presentation of statistics on debt securities issued by residents across all markets. It is one of the basic principles of international statistical standards, such as the *2008 SNA* and the *BPM6*. The institutional unit issuing debt securities (as with all other liabilities) of this institutional unit are allocated to the same sector. The debt securities outstanding are part of the balance sheet of this sector, and transactions in the debt securities are part of the economic sector’s financial account. Under the residence of issuer approach, statistics on debt securities issues are presented as an integral part of the national accounts, and portfolio and direct investment is presented in the balance of payments and international investment position.

9.5 The location of issue approach allows the presentation of statistics on debt securities issued by residents and nonresidents in the domestic market.¹ It is an extension to the residence of issuer approach and may provide supplementary information, as it classifies by economic sector the debt securities issued in the domestic market. This approach can support analysis of the relative importance of financial centers. This analysis can also provide information on the motivation of debtors and creditors, such as the attractiveness of the domestic debt securities market to foreign investors, and possible liquidity risk.

9.6 From a monetary policy and financial stability perspective, it is important to analyze and understand the relative size of the different issuing sectors and sub-sectors, including nonresidents’ issues. An indication

¹The two approaches can also be combined. In this case, debt securities issues in international markets would also be shown separately for resident issuers, and all markets would comprise the domestic and international markets where these issuers are present.

Table 9.1 Debt Securities Issues by Issuer, Currency, Maturity, Interest Rate, and Market

Market, currency, maturity, and interest rate		Issuer	Residents				Nonresidents	All issuers	Location of issue
			NFCs	FCs	GG	HHs and NPISHs			
1. Domestic market	1.1 Currency								
	1.2 Maturity								
	1.3 Interest rate								
	1.4 Memo item: securitization debt securities								
2. International markets	2.1 Currency								
	2.2 Maturity								
	2.3 Interest rate								
	2.4 Memo item: securitization debt securities								
3. All markets	3.1 Currency								
	3.2 Maturity								
	3.3 Interest rate								
	3.4 Memo item: securitization debt securities								
			Residence of issuer						

Note: NFCs = nonfinancial corporations; FCs = financial corporations; GG = general government; HH = households; NPISHs = nonprofit institutions serving households.

of the openness of national capital markets may also be obtained from having accurate data on the issuance activity of nonresidents in domestic markets.

9.7 Table 9.2 combines classifications by issuer and market. It shows debt securities issues broken down by issuer and market, with a split between:

- Issuer into resident sectors and subsectors
- Market into domestic market and international markets.

9.8 The third row of Table 9.2 represents debt securities issued by all issuers in all markets. Supplementary statistics may also be shown for debt securities issued by nonresidents and all issuers in the domestic market.

Debt securities issues by currency, maturity, and interest rate, and by position and flows

9.9 Various two-dimensional tables are embedded in Table 9.1, reflecting the range of statistics and classifications outlined in this *Handbook*.

- Tables 9.3 to 9.5 combine data on issuers with currency, maturity, and interest rate, respectively.
- Table 9.6 combines data on issuers with positions, transactions, revaluations, and other changes in volume.

9.10 Tables 9.3 to 9.6 follow the residence of issuer approach as recommended in international statistical standards. The resident institutional sectors and subsectors are specified according to Chapter 4. The public sector may also be included as a memorandum item.

9.11 Tables 9.3 to 9.6 may also be used to present statistics on debt securities issues following the location of issue approach. Entries would show issues in the domestic market by residents and nonresidents. For this purpose, two columns are included to present debt securities issued by nonresidents and all issuers in the domestic market.

9.12 The *Handbook* recommends presenting statistics on positions and transactions in Tables 9.3 to 9.5

Table 9.2 Debt Securities Issues by Issuer and Market

Market	Issuer		Residents							Nonresidents	All issuers	
	NFCs	CB	FCs				GG		HHs and NPISHs			Memo item: public sector
			Other money-issuing corps.	Securitization corporations	OFCs	CG	Other GG					
1. Domestic market												
2. International markets												
3. All markets												

Note: FCs = financial corporations; GG = general government; NFCs = nonfinancial corporations; CB: central bank; OFCs: other financial corporations; CG: central government. HH = households; NPISHs = nonprofit institutions serving households.

Table 9.3 Debt Securities Issues by Issuer and Currency

Currency	Issuer		Residents							Nonresidents	All issuers	
	NFCs	CB	FCs				GG		HHs and NPISHs			Memo item: public sector
			Other money-issuing corps.	Securitization corps.	OFCs	CG	Other GG					
1. Domestic currency												
2. Foreign currencies												
3. All currencies												

Note: FCs = financial corporations; GG = general government; NFCs = nonfinancial corporations; CB = central bank; OFCs = other financial corporations; CG = central government; HHs = households; NPISHs = nonprofit institutions serving households.

expressed in market value. In addition, it is recommended that positions be expressed in nominal value.

Debt securities issues classified by issuer and currency

9.13 Data on the currency composition of debt securities can be important for financial stability analysis. For example, potential currency mismatches can emerge

in countries with debt denominated in foreign currencies that experience sudden and large exchange rate depreciation. These countries can be vulnerable to a large increase in domestic currency-denominated debt repayments, even if the initial level of debt is not high.

9.14 Table 9.3 combines classifications by issuer and currency. It shows debt securities issues broken down by issuer and currency of denomination, with a split

into domestic currency and foreign currencies. The third row represents debt securities issued in all currencies by different sectors.

9.15 While the *Handbook* recommends that debt securities issues be presented on a “currency of denomination” basis only, the distinction between “currency of denomination” and “currency of settlement” should nevertheless be kept in mind.

Debt securities issues classified by issuer and maturity

9.16 Table 9.4 combines classifications by issuer and maturity. It shows debt securities issues broken down by issuer and maturity, with a split into short and long-term at original maturity, and long-term broken

down further into four subcategories. The third row represents debt securities issued in all maturities. A memorandum item shows debt securities issues with a long-term original maturity that have a remaining maturity of up to and including one year.

Debt securities issues classified by issuer and interest rate

9.17 From a financial stability perspective, institutional units that issue a large proportion of debt securities with a variable interest rate may be exposed to more financial stress during periods of financial shocks. Furthermore, the operation of the monetary policy transmission mechanism may be influenced by the mix of fixed and variable interest

Table 9.4 Debt Securities Issues by Issuer and Maturity

Maturity	Issuer		Residents							Nonresidents	All issuers
	NFCs	CB	FCs			GG		HHs and NPISHs	Memo item: public sector		
			Other money-issuing corps.	Securitized corps.	OFCs	CG	Other GG				
1. Short-term at original maturity											
2. Long-term at original maturity											
2.1 More than 1 year and up to and including 2 years											
2.2 More than 2 years and up to and including 5 years											
2.3 More than 5 years and up to and including 10 years											
2.4 More than ten years											
3. All maturities											
4. Memo item: long-term at original maturity, with a remaining maturity up to and including 1 year											

Note: FCs = financial corporations; GG = general government; NFCs = nonfinancial corporations; CB = central bank; OFCs = other financial corporations; CG = central government; HHs = households; NPISHs = nonprofi t institutions serving households.

Table 9.5 Debt Securities Issues by Issuer and Interest Rate

Interest rate	Issuer	Residents								Nonresidents	All issuers	
		NFCs	FCs				GG		HHs and NPISHs			Memo item: public sector
			CB	Other money-issuing corps.	Securitization corps.	OFCs	CG	Other GG				
1. Fixed interest rate												
2. Variable interest rate												
2.1 Inflation-linked												
2.2 Interest rate-linked												
2.3 Asset price-linked												
3. All interest rates												

Note: FCs = financial corporations; GG = general government; NFCs = nonfinancial corporations; OFCs = other financial corporations; CG = central government; HHs = households; NPISHs = nonprofit institutions serving households.

rate debt securities. For example, if a large proportion of outstanding debt securities have a variable interest rate coupon, movements in market interest rates driven by changes to official interest rates can potentially make the impact of monetary policy more potent.

9.18 Table 9.5 combines classifications by issuer and interest rate. It shows debt securities issues broken down by issuer and interest rate, with a split into fixed and variable interest rate, and variable interest rate further broken down into three subcategories. The last row represents debt securities issued in all interest rates.

Debt securities issues classified by issuer: positions and flows

9.19 Debt securities statistics can be used to present positions and flows in some detail, in line with Chapter 5.

9.20 Table 9.6 shows the position and flow relationship for debt securities issues. Expressed in market value, these statistics cover positions at the end of the previous period, flows during the current period, and positions at the end of the current period. Transactions are further split into gross

(gross issues and redemptions) and net (gross issues net of redemptions).

Equity Securities Issues

9.21 The type A presentation table (Table 1.2 in Chapter 1) is based on the “residence of issuer” approach for equity securities. Each institutional unit that issues equity securities is allocated to an economic sector. The equity securities issued are part of the balance sheet of this sector, and transactions in such equity securities form part of the economic sector’s financial account.

9.22 Under the “residence of issuer” approach, statistics on equity securities issuance are presented as an integral part of the national accounts, and portfolio and direct investment is presented in the balance of payments and international investment position. Equity securities issuance by resident sectors is shown without any breakdown on the basis of holders’ residence or economic sector, and equity securities issued by residents and held by nonresidents are also shown.

9.23 This subsection outlines three possible ways of presenting statistics on equity securities issuance when following the “residence of issuer” approach:

Table 9.6 Debt Securities Issues by Issuer: Positions and Flows

Positions and flows	Issuer		Residents							Nonresidents	All issuers	
	NFCs	CB	FCs				GG		HHs and NPISHs			Memo item: public sector
			Other money-issuing corps.	Securitization corps.	OFCs	CG	Other GG					
1. Position at end of previous period												
2. Issues during current period												
2.1 Net issues (gross issues net of redemptions)												
2.2 Gross issues												
2.3 Redemptions												
3. Revaluations during current period												
4. Other changes in volume during current period												
5. Position at end of current period												

Note: FCs = financial corporations; GG = general government; NFCs = nonfinancial corporations; CB = central bank; OFCs = other financial corporations; CG = central government; HHs = households; NPISHs = nonprofit institutions serving households.

broken down by type of financial instrument, by issuing sector and subsector, or on the basis of positions and flows.

Equity securities issues classified by type of share

9.24 Table 9.7 shows the two types of equity security: listed and unlisted shares.

Equity securities issues classified by issuer and type of share

9.25 Table 9.8 gives a breakdown of issuers by resident sector, resident financial corporation subsector, and residence. It also distinguishes ordinary shares from other listed shares.

9.26 The breakdown by financial corporation subsector allows shares issued by money-issuing corporations, insurance corporations, pension funds, and other financial corporations to be shown.

Equity securities issues classified by issuer: positions and flows

9.27 Table 9.9 shows positions, transactions, revaluations, and other changes in the volume of assets and liabilities for: equity securities issued by resident sectors and (in the case of financial corporations) subsectors; equity securities issued by nonresidents; and equity securities held by residents and nonresidents.

9.28 Expressed in terms of market value, these statistics cover:

- Positions in equity securities at the end of the previous period
- Net issuance, revaluations, and other changes in the volume of assets and liabilities during the current period
- Positions in equity securities at the end of the current period.

Issuers		Residents				General government	Nonresidents	All issuers	
		Nonfinancial corporations	Financial corporations						
			Money-issuing corporations	Insurance corporations	Pension funds				Other financial corporations
Residents	Position at end of previous period								
	Net issuance during current period								
	Revaluations during current period								
	Other changes in the volume of assets during current period								
	Position at end of current period								
Nonresidents	Position at end of previous period								
	Net issuance during current period								
	Revaluations during current period								
	Other changes in the volume of assets during current period								
	Position at end of current period								
All holders	Position at end of previous period								
	Net issuance during current period								
	Revaluations during current period								
	Other changes in the volume of assets during current period								
	Position at end of current period								

9.29 Transactions can be presented on both a net basis (issuance minus redemptions) and a gross basis (with details of both issuance and redemptions).

Type B Presentation Tables (the “Residence of Holder” Approach)

Debt Securities Holdings

9.30 The type B presentation table on debt securities holdings (Table 1.4 of Chapter 1) is based on the “residence of holder” approach. Each institutional

unit that holds debt securities is allocated to an economic sector. The debt securities holdings are part of the balance sheet (asset portfolio) of this sector, and transactions in debt securities holdings are part of the economic sector’s financial account. Under the residence of holder approach, statistics on debt securities holdings are presented as an integral part of the national accounts, and portfolio investment is presented in the balance of payments and international investment position. The debt securities holdings of resident sectors are shown without any breakdown on

Table 9.10 Debt Securities by Holder, Currency, Maturity, and Type of Interest Rate

Issuer by residence and by currency, maturity, and type of interest rate		Holder	Residents					Nonresidents	All holders
			NFCs	FCs	GG	HHs and NPISHs	All residents		
Residents	Currency								
	Maturity								
	Interest rate								
Nonresidents	Currency								
	Maturity								
	Interest rate								
All issuers	Currency								
	Maturity								
	Interest rate								

Note: NFCs = nonfinancial corporations; FCs = financial corporations; GG = general government; HHs = households; NPISHs = nonprofit institutions serving households.

the basis of the issuer's residence or resident sector, and the debt securities issued by residents and held by nonresidents are also shown.

9.31 Statistics on debt securities held by institutional units may be classified in accordance with four basic criteria: holder (individual or sector, residence or ultimate beneficial owner), currency, maturity, and type of interest rate. These classification criteria are consistent with the international statistical standards.² As a result of group consolidation, a relevant criterion for financial stability analysis, some classifications may depart from these standards.

9.32 Table 9.10 reflects the residence of holder approach and shows these four classification criteria.

9.33 The two-dimensional tables presented below offer a breakdown of debt securities held by resident sectors, resident financial corporation subsectors, and nonresidents by currency, maturity, and interest rate.

9.34 The breakdown by financial corporation subsector allows the debt securities holdings of money-issuing

corporations and of institutional investors such as non-MMF investment funds, insurance corporations, and pension funds to be shown.

Debt securities holdings classified by holder and currency

9.35 Data on the currency composition of the debt securities held by an economy, a resident institutional sector or subsector, a major resident institutional unit, or nonresidents may be important for financial stability analysis.³ Economies, sectors, subsectors, and institutional units that hold debt securities denominated in foreign currencies or linked to a foreign currency may be vulnerable in the event of large exchange rate changes.

9.36 Table 9.11 shows debt securities held by resident sectors, by resident financial corporation subsectors, and nonresidents broken down by residence of issuer and by currency of denomination. A split into domestic currency and foreign currencies is recommended.

²The market criterion (location of issue) is relevant only to debt securities issues.

³However, any currency analysis would also need to take into account currency derivatives used for hedging purposes.

Table 9.11 Debt Securities by Residence, Resident Sector and Resident Financial Subsector of Holder, by Residence of Issuer, and by Currency Denomination

Issuer by residence and by currency denomination		Holder		Residents							Nonres- idents	All holders					
		Nonfinancial corporations	Financial corporations	Central bank	Other money-issuing corporations	Non-MMF investment funds	Securitization corporations	Insurance corporations	Pension funds	Other financial corporations			General government	Households and NPISHs	Memo item: public sector		
																Holder	
																Resident	Nonresident
Residents	Domestic currency																
	Foreign currencies																
	All currencies																
Nonresidents	Domestic currency																
	Foreign currencies																
	All currencies																
All issuers	Domestic currency																
	Foreign currencies																
	All currencies																

Debt securities holdings classified by holder and maturity

9.37 Table 9.12 shows debt securities held by resident sectors, resident financial corporation subsectors, and nonresidents broken down by maturity. A split into short- and long-term original maturity is recommended. The fourth row of the maturity breakdown represents debt securities held for all maturities. A memorandum item shows debt securities holdings with a long-term original maturity that have a remaining maturity of up to and including one year.

Debt securities holdings classified by holder and interest rate

9.38 A breakdown of holdings of debt securities on the basis of fixed and variable interest rates is useful for monetary policy and financial stability analy-

sis. Holders of fixed interest rate debt securities are adversely affected when market interest rates rise, while, conversely, holders of variable interest rate debt securities are affected when they decline.

9.39 A further breakdown of variable interest rate debt securities holdings into inflation-linked, asset price-linked, and interest rate-linked instruments may be appropriate.

9.40 Table 9.13 shows debt securities held by resident sectors, resident financial corporation subsectors, and nonresidents broken down by type of interest rate. Although a split into fixed and variable interest rates is recommended, debt securities with a complex interest rate structure may be excluded from this breakdown. The third row of the breakdown by type of interest rate represents debt securities held for all types of interest rate.

Table 9.12 Debt Securities by Residence, Resident Sector and Resident Financial Subsector of Holder, by Residence of Issuer, and by Maturity

Issuer by residence and by maturity		Holder	Residents								Nonresi- dents	All holders		
			Financial corporations						General government	Households and NPISHs			Memo item: public sector	
			Nonfinancial corporations	Central bank	Other money-issuing corporations	Non-MMF investment funds	Securitization corporations	Insurance corporations						Pension funds
Residents	Short-term original maturity Long-term original maturity <i>Memo item: long-term original maturity, with a remaining maturity of up to and including 1 year</i> All maturities													
Nonresi- dents	Short-term original maturity Long-term original maturity <i>Memo item: long-term original maturity, with a remaining maturity of up to and including 1 year</i> All maturities													
All issuers	Short-term original maturity Long-term original maturity <i>Memo item: long-term original maturity, with a remaining maturity of up to and including 1 year</i> All maturities													

Debt securities holdings classified by holder: positions and flows

9.41 Table 9.14 shows the positions, transactions, revaluations, and other changes in the volume of assets for debt securities held by resident sectors, resident financial corporation subsectors, and non-residents and issued by residents and nonresidents. Expressed in terms of market value, these statistics

cover the positions in debt securities at the end of the previous period, the net acquisitions, revaluations and other changes in the volume of assets in debt securities during the latest period, and the positions in debt securities at the end of the latest period. Transactions are presented net (acquisitions minus disposals). They may also be presented gross (with details of both gross acquisitions and disposals).

Table 9.13 Debt Securities by Residence, Resident Sector and Resident Financial Subsector of Holder, by Residence of Issuer, and by Type of Interest Rate

Issuer by residence and by type of interest rate		Holder		Residents								Nonres- idents	All holders				
		Nonfinancial corporations	Financial corporations	Central bank	Other money-issuing corporations	Non-MMF investment funds	Securitization corporations	Insurance corporations	Pension funds	Other financial corporations	General government			Households and NPISHs	Memo item: public sector		
Residents	Fixed interest rate																
	Variable interest rate																
	All interest rates																
Nonresidents	Fixed interest rate																
	Variable interest rate																
	All interest rates																
All issuers	Fixed interest rate																
	Variable interest rate																
	All interest rates																

Equity Securities Holdings

9.42 The type B presentation table on equity securities holdings (Table 1.4 in Chapter 1) is based on the “residence of holder” approach. Each institutional unit that holds equity securities is allocated to an economic sector. Those equity securities holdings are part of the balance sheet (asset portfolio) of that sector, and transactions in equity securities form part of the economic sector’s financial account.

9.43 Under the “residence of holder” approach, statistics on equity securities holdings are presented as an integral part of the national accounts, and portfolio and direct investment is presented in the balance of payments and international investment position. Equity securities holdings of resident sectors are shown without any breakdown on the basis of the

issuer’s residence or economic sector, and equity securities issued by residents and held by nonresidents are also shown.

9.44 Table 9.15 shows equity securities holdings following the “residence of holder” approach and with a breakdown by holder and type of equity security. It shows equity securities holdings of resident sectors, resident financial corporations subsectors, and nonresidents broken down on the basis of the issuer’s residence.

9.45 The breakdown of holders by subsector for financial corporations allows the equity securities holdings of money-issuing corporations and institutional investors such as non-MMF investment funds, insurance corporations, and pension funds to be shown.

Table 9.14 Debt Securities by Residence, Resident Sector and Resident Financial Subsector of Holder, and by Residence of Issuer: Positions and Flows

Issuer by residence and by positions, net acquisitions, revaluations, and other changes in the volume of assets		Holder		Residents										Nonresidents	All holders										
		Nonfinancial corporations	Financial corporations	Central bank	Other money-issuing corporations	Non-MMF investment funds	Securitization corporations	Insurance corporations	Pension funds	Other financial corporations	General government	Households and NPIs	Memo item: public sector												
Residents	Position at end of previous period																								
	Net acquisitions during the current period																								
	Revaluations during the current period																								
	Other changes in the volume of assets during current period																								
	Position at end of the current period																								
Nonresidents	Position at end of previous period																								
	Net acquisitions during the current period																								
	Revaluations during the current period																								
	Other changes in the volume of assets during current period																								
	Position at end of the current period																								
All issuers	Position at end of previous period																								
	Net acquisitions during the current period																								
	Revaluations during the current period																								
	Other changes in the volume of assets during current period																								
	Position at end of the current period																								

9.46 It is also recommended that holdings of equity securities be broken down further into those denominated in domestic currency and those denominated in foreign currencies as shown in Table 9.16.

9.47 Table 9.17 shows positions, transactions, revaluations and other changes in the volume of assets for equity securities held by resident sectors, resident financial corporation subsectors, and nonresidents, issued by residents and nonresidents.

9.48 Expressed in terms of market value, these statistics cover:

- Positions in equity securities at the end of the previous period
- Net acquisitions, revaluations, and other changes in the volume of assets during the current period
- Positions in equity securities at the end of the current period.

Table 9.15 Equity Securities by Residence, Resident Sector and Resident Financial Subsector of Holder, by Residence of Issuer and by Type of Share

Issuer \ Holder		Residents										Nonresidents	All holders
		Nonfinancial corporations	Financial corporations						General government	Households and NPISHs	Memo item: Public sector		
			Central bank	Deposit-taking corporations except the central bank	Non-MMF investment funds	Securitization corporations	Insurance corporations	Pension funds					
Residents	Listed shares												
	Of which: Ordinary shares												
Nonresidents	Listed shares												
	Of which: Ordinary shares												
All issuers	Listed shares												
	Of which: Ordinary shares												
	Unlisted shares												
	Of which: Ordinary shares												

9.49 Transactions are presented on a net basis (i.e., acquisitions minus disposals). They may also be presented on a gross basis (i.e., with details of both acquisitions and disposals).

Type C Presentation Tables (the “From-Whom-to-Whom” Approach)

Debt Securities

9.50 The type C presentation table (Table 1.5 in Chapter 1) is based on the “from-whom-to-whom” approach. Table 9.18 shows positions, transactions, revaluations and other changes in the volume of assets for securities held by resident sectors and by nonresidents, with a breakdown by institutional sector for resident issuers. Furthermore, holdings

of nonresidents of debt securities issued by residents are shown (penultimate column) as well as debt securities issued by nonresidents and held by resident sectors (penultimate row, dark gray cells). However, holdings of nonresidents of debt securities issued by nonresidents are not covered (black cells).

9.51 For residents, the presentation of unconsolidated data on debt securities holdings is recommended, covering intra-sectoral positions and flows of debt securities issues and holdings (diagonal cells of Table 9.18 in medium gray).

9.52 Three-dimensional tables in a “from-whom-to-whom” framework include, in addition to the two standard dimensions, a breakdown or combination of breakdowns of debt securities by subcategory (currency, maturity, and interest rate).

Table 9.16 Equity Securities by Residence, Resident Sector and Resident Financial Subsector of Holder, by Residence of Issuer, and by Currency of Denomination*

Issuer \ Holder		Residents									Nonresidents	All holders	
		Nonfinancial corporations	Financial corporations						General government	Households and NPISHs			Memo item: Public sector
			Central bank	Deposit-taking corporations except the central bank	Non-MMF investment funds	Securitization corporations	Insurance corporations	Pension funds					
Residents	Domestic currency												
Nonresidents	Domestic currency												
	Foreign currencies												
	All currencies												
All issuers	Domestic currency												
	Foreign currencies												
	All currencies												

*Some equity securities are issued by resident corporations in currencies other than the domestic currency.

“From-whom-to-whom” framework classified by holder, issuer, and currency

9.53 Table 9.19 shows debt securities held by resident sectors and by nonresidents broken down vis-à-vis resident issuers by sector and nonresident issuers. Debt securities holdings are further split by currency of denomination. A split into domestic currency and foreign currencies is recommended. The third row of the currency breakdown represents debt securities held by resident sectors and by nonresidents in all currencies.

“From-whom-to-whom” framework classified by holder, issuer, and maturity

9.54 Table 9.20 shows debt securities held by resident sectors and by nonresidents broken down vis-à-vis resident issuers by sector and nonresident issuers. Debt securities holdings are further split into short-

and long-term original maturity. The fourth row of the maturity breakdown represents debt securities held for all maturities.

9.55 A memorandum item shows debt securities holdings with a long-term original maturity that have a remaining maturity up to and including one year.

“From-whom-to-whom” framework classified by holder, issuer, and interest rate

9.56 Table 9.21 shows debt securities held by resident sectors and by nonresidents broken down vis-à-vis resident issuers by sector and nonresident issuers. Debt securities holdings are further split into fixed and variable interest rate debt securities. The third row of the breakdown by type of interest rate represents debt securities held for all types of interest rate.

Table 9.17 Equity Securities by Residence, Resident Sector and Resident Financial Subsector of Holder, and by Residence of Issuer: Positions and Flows

Issuer \ Holder		Residents											Nonresidents	All holders
		Financial corporations						General government	Households and NPISHs	Memo item: Public sector				
		Nonfinancial corporations	Central bank	Deposit-taking corporations except the central bank	Non-MMF investment funds	Securitization corporations	Insurance corporations				Pension funds			
												Other financial corporations		
Residents	Position at end of previous period													
	Net acquisitions during current period													
	Revaluations during current period													
	Other changes in the volume of assets during current period													
	Position at end of current period													
Nonresidents	Position at end of previous period													
	Net acquisitions during current period													
	Revaluations during current period													
	Other changes in the volume of assets during current period													
	Position at end of current period													
All issuers	Position at end of previous period													
	Net acquisitions during current period													
	Revaluations during current period													
	Other changes in the volume of assets during current period													
	Position at end of current period													

“From-whom-to-whom” framework classified by holder and issuer: positions and flows

9.57 Table 9.22 shows the position and flow relationship for debt securities held by resident sectors and by nonresidents vis-à-vis resident sectors and nonresidents as issuers. Expressed in terms of market value, these statistics cover positions at the end of the previous period, transactions, revaluations and other changes in the volume of assets during the current

period, and positions at the end of the current period. Transactions are presented net (acquisitions minus disposals).

9.58 Like positions and transactions, revaluations (holding gains or losses) and other changes in volume may be presented in a three-dimensional table with breakdowns by residence and resident institutional sector of the holder and issuer. Such detailed statistical information could be provided by security-by-security (SBS) databases.

Table 9.18 Debt Securities Holdings in a “From-Whom-to-Whom” Framework by Residence and Resident Sector of Holder, by Currency, Maturity, and Interest rate, and by Residence and Resident Sector of Issuer

Issuer by residence and resident sector and by currency, maturity, and interest rate			Holder by residence and resident sector				Nonresidents	All holders
			Residents					
			NFCs	FCs and subsectors	GG	HHs and NPISHs		
Residents	Nonfinancial corporations	Currency						
		Maturity						
		Interest rate						
	Financial corporations and subsectors	Currency						
Maturity								
Interest rate								
General government	Currency							
	Maturity							
	Interest rate							
Households and NPISHs ¹	Currency							
	Maturity							
	Interest rate							
Nonresidents		Currency						
		Maturity						
		Interest rate						
All issuers		Currency						
		Maturity						
		Interest rate						

Note: NFCs = nonfinancial corporations; FCs = financial corporations; GG = general government; HHs = households; NPISHs = nonprofit institutions serving households.

1) Households and NPISHs may be legally entitled to issue debt securities. In the case of households, debt securities can be issued to finance dwelling purchases.

“From-whom-to-whom” framework classified by resident financial corporation subsector as holder, by residence and resident sector as issuer, and by original maturity

9.59 Presentations using three-dimensional tables may be designed for subsectors or groupings of financial corporations, like money-issuing corporations or institutional investors, to show the role of financial intermediaries in providing financial resources to other sectors through maturity or asset transformation. Positions and flows of money-issuing corporations, insurance corporations, pension funds, and other financial corporations are likely to be of great interest.

9.60 Such expanded presentations may also reveal a growing (or shrinking) role for other types of financial intermediary and financial institution, and shed light on the nature of their business in terms of the counterparties with whom they transact as well as the types of debt security that they hold or trade.

9.61 Table 9.23 presents a sector/subsector breakdown of holders of debt securities in a “from-whom-to-whom” framework, allowing a detailed analysis of the interrelationship between debt securities issuers and holders. It shows the debt securities holdings of the five main subsectors of the financial corporations sector. The holdings are broken down by (original)

Table 9.19 Debt Securities Holdings in a “From-Whom-to-Whom” Framework by Residence, Resident Sector, and Currency

Issuer by residence and resident sector and by currency, maturity, and interest rate			Residents				Nonresidents	All holders
			NFCs	FCs and subsectors	GG	HHs and NPISHs		
Residents	Nonfinancial corporations	Domestic currency						
		Foreign currencies						
		All currencies						
	Financial corporations and subsectors	Domestic currency						
Foreign currencies								
All currencies								
General government	Domestic currency							
	Foreign currencies							
	All currencies							
Households and NPISHs ¹	Domestic currency							
	Foreign currencies							
	All currencies							
Nonresidents		Domestic currency						
		Foreign currencies						
		All currencies						
All issuers		Domestic currency						
		Foreign currencies						
		All currencies						

Note: NFCs = nonfinancial corporations; FCs = financial corporations; GG = general government; HHs = households; NPISHs = nonprofit institutions serving households.

1) Households and NPISHs may be legally entitled to issue debt securities. In the case of households, debt securities can be issued to finance dwelling purchases.

maturity and, within each maturity category, by residence and resident sector of the issuer. Depending on the availability of data, different degrees of detail could be shown, such as further breakdowns of securities holdings by currency and type of interest rate.

9.62 For financial stability purposes, a more detailed breakdown of debt securities holdings is required, namely by individual issuers. As a first step, a breakdown of investors in the debt securities of individual issuers by financial corporations subsector (e.g., money-issuing corporations, insurance corporations, pension funds, and non-MMF investment funds) may be useful. Thereafter,

issuer-by-issuer data may be required for systemically relevant investors, such as large and complex financial and nonfinancial groups consolidated on a group basis.

Equity Securities

9.63 The type C presentation table (Table 1.5 in Chapter 1) is based on the “from-whom-to-whom” approach. Table 9.24, which refers to that table, shows positions, transactions, revaluations, and other changes in the volume of assets for equity securities held by residents and nonresidents, with a breakdown by institutional sector for resident issuers. It also shows nonresidents’ holdings of equity securities

Table 9.20 Debt Securities Holdings in a “From-Whom-to-Whom” Framework by Residence, Resident Sector, and Maturity

Holder by residence and resident sector			Residents				Nonresidents	All holders
			NFCs	FCs and subsectors	GG	HHs and NPISHs		
Issuer by residence and resident sector and by maturity								
Residents	Nonfinancial corporations	Short-term at original maturity Long-term at original maturity <i>Memo item: long-term at original maturity, with a remaining maturity up to and including 1 year</i> All maturities						
	Financial corporations and subsectors	Short-term at original maturity Long-term at original maturity <i>Memo item: long-term at original maturity, with a remaining maturity up to and including 1 year</i> All maturities						
	General government	Short-term at original maturity Long-term at original maturity <i>Memo item: long-term at original maturity, with a remaining maturity up to and including 1 year</i> All maturities						
	Households and NPISHs ¹	Short-term at original maturity Long-term at original maturity <i>Memo item: long-term at original maturity, with a remaining maturity up to and including 1 year</i> All maturities						
Nonresidents		Short-term at original maturity Long-term at original maturity <i>Memo item: long-term at original maturity, with a remaining maturity up to and including 1 year</i> All maturities						
All issuers		Short-term at original maturity Long-term at original maturity <i>Memo item: long-term at original maturity, with a remaining maturity up to and including 1 year</i> All maturities						

Note: NFCs = nonfinancial corporations; FCs = financial corporations; GG = general government; HHs = households; NPISHs = nonprofit institutions serving households.

Table 9.21 Debt Securities Holdings in a “From-Whom-to-Whom” Framework by Residence, Resident Sector, and Interest Rate

Holder by residence and resident sector			Residents				Nonresidents	All holders
			NFCs	FCs and subsectors	GG	HHs and NPISHs		
Issuer by residence and resident sector and by interest rate								
Residents	Nonfinancial corporations	Fixed interest rate						
		Variable interest rate						
		All interest rates						
	Financial corporations and subsectors	Fixed interest rate						
		Variable interest rate						
		All interest rates						
	General government	Fixed interest rate						
		Variable interest rate						
		All interest rates						
	Households and NPISHs	Fixed interest rate						
		Variable interest rate						
		All interest rates						
Nonresidents		Fixed interest rate						
		Variable interest rate						
		All interest rates						
All issuers		Fixed interest rate						
		Variable interest rate						
		All interest rates						

Note: NFCs = nonfinancial corporations; FCs = financial corporations; GG = general government; HHs = households; NPISHs = nonprofit institutions serving households.

issued by residents (penultimate column), as well as equity securities issued by nonresidents and held by resident sectors (penultimate row, dark gray). However, nonresidents' holdings of equity securities issued by nonresidents are not covered (black cells).

9.64 For residents, the presentation of unconsolidated data on equity securities holdings and issuance—that is, including intrasectoral positions and flows (diagonal cells with borders in Table 9.24)—is recommended.

9.65 Three-dimensional tables in a “from-whom-to-whom” framework include, in addition to the two standard dimensions, a breakdown (or combination of breakdowns) of equity securities by subcategory.

9.66 Table 9.25 shows equity securities held by resident sectors and nonresidents, broken down on the

basis of the residence and resident sector of the issuer. It also provides a currency breakdown for equity securities held by resident sectors and nonresidents, with a split into securities denominated in domestic currency and in foreign currencies.

9.67 Table 9.26 shows positions and flows for equity securities held and issued by resident sectors and nonresidents. Expressed in terms of market value, these statistics cover: positions at the end of the previous period; transactions, revaluations and other changes in the volume of assets during the current period; and positions at the end of the current period. Transactions are presented on a net basis (acquisitions minus disposals).

9.68 Like positions and transactions, revaluations (holding gains or losses) and other changes in volume

Table 9.22 Debt Securities Holdings in a “From-Whom-to-Whom” Framework: Positions and Flows

Holder by residence and resident sector			Residents				Nonresidents	All holders
			Nonfinancial corporations	Financial corporations and subsectors	General government	Households and NPISHs ¹		
Issuer by residence and resident sector and by maturity								
Residents	Nonfinancial corporations	Position at end of previous period Net acquisitions during the current period Revaluations during the current period Other changes in the volume of assets during current period Position at end of the current period						
	Financial corporations	Position at end of previous period Net acquisitions during the current period Revaluations during the current period Other changes in the volume of assets during current period Position at end of the current period						
	General government	Position at end of previous period Net acquisitions during the current period Revaluations during the current period Other changes in the volume of assets during current period Position at end of the current period						
	Households and NPISHs	Position at end of previous period Net acquisitions during the current period Revaluations during the current period Other changes in the volume of assets during current period Position at end of the current period						
Nonresidents		Position at end of previous period Net acquisitions during the current period Revaluations during the current period Other changes in the volume of assets during current period Position at end of the current period						
All issuers		Position at end of previous period Net acquisitions during the current period Revaluations during the current period Other changes in the volume of assets during current period Position at end of the current period						

Table 9.23 Debt Securities Holdings of Resident Financial Corporations Subsectors in a “From-Whom-to-Whom” Framework, by Residence and Resident Sector of Issuer, and by Original Maturity

Holder by resident financial corporation subsector Original maturity, residence and sector of issuer	CB	Other money-issuing corporations	Non-MMF IFs	ICs and PFs	OFCs
Short-term					
Residents					
Nonfinancial corporations					
Financial corporations					
General government					
Households and NPISHs					
Nonresidents					
Long-term					
Residents					
Nonfinancial corporations					
Financial corporations					
General government					
Households and NPISHs					
Nonresidents					
<i>Memo: Long-term at original maturity, with a remaining maturity up to and including 1 year</i>					
<i>Residents</i>					
<i>Nonfinancial corporations</i>					
<i>Financial corporations</i>					
<i>General government</i>					
<i>Households and NPISHs</i>					
<i>Nonresidents</i>					

Note: CB = central bank; MMF = money market funds; IF = investment funds; IC = insurance corporations; PFs = pension funds; OFCs = other financial corporations; Other money-issuing corporations cover deposit-taking corporations and MMFs.

can be presented in a three-dimensional table with breakdowns by place of residence and resident institutional sector for the holder and the issuer. Such detailed statistical information could be provided by SBS databases.

9.69 Presentations using three-dimensional tables can be designed for specific subsectors or groups of financial corporations (such as money-issuing corporations or institutional investors) to show the role of financial intermediaries in providing financial resources to other sectors. Positions and flows of money-issuing corporations, insurance corporations,

pension funds, and other financial corporations are likely to be of specific interest.

9.70 Such expanded presentations may also reveal a growing (or shrinking) role for other types of financial intermediary and financial institution, shedding light on the nature of their business in terms of the counterparties with whom they transact and the types of equity security that they hold or trade.

9.71 Table 9.27 presents a breakdown of holders of equity securities by sector and subsector in a “from-whom-to-whom” framework, allowing a

Table 9.24 Equity Securities Holdings in a “From-Whom-to-Whom” Framework by Residence and Resident Sector of Holder, by Type of Financial Instrument and Residence, and Resident Sector of the Issuer

Issuer \ Holder			Residents				Nonresidents	All holders
			NFCs	FCs and subsectors	GG	HHs and NPISHs		
Residents	Nonfinancial corporations	Listed shares						
		Unlisted shares						
	Financial corporations and subsectors	Listed shares						
		Unlisted shares						
	General government	Listed shares						
		Unlisted shares						
Nonresidents		Listed shares						
		Unlisted shares						
All issuers		Listed shares						
		Unlisted shares						

Note: NFC = nonfinancial corporations; FC = financial corporations; GG = general government; HHs = households; NPISHs = nonprofit institutions serving households.

Table 9.25 Equity Securities Holdings in a “From-Whom-to-Whom” Framework by Residence and Resident Sector of Holder and Currency of Denomination*

Issuer \ Holder			Residents				Nonresidents	All holders
			NFCs	FCs and subsectors	GG	HHs and NPISHs		
Residents	Nonfinancial corporations	Domestic currency						
	Financial corporations and subsectors	Domestic currency						
	General government	Domestic currency						
Nonresidents		Domestic currency						
		Foreign currencies						
		All currencies						
All issuers		Domestic currency						
		Foreign currencies						
		All currencies						

*Some equity securities are issued by resident corporations in currencies other than the domestic currency.

Table 9.26 Equity Securities Holdings in a “From-Whom-to-Whom” Framework: Positions and Flows

Issuer		Holder	Residents				Nonresidents	All holders
			Nonfinancial corporations	Financial corporations and subsectors	General government	Households and NPISHs		
Residents	Nonfinancial corporations	Position at end of previous period Net acquisitions during current period Revaluations during current period Other changes in the volume of assets during current period Position at end of current period						
	Financial corporations	Position at end of previous period Net acquisitions during current period Revaluations during current period Other changes in the volume of assets during current period Position at end of current period						
	General government	Position at end of previous period Net acquisitions during current period Revaluations during current period Other changes in the volume of assets during current period Position at end of current period						
Nonresidents		Position at end of previous period Net acquisitions during current period Revaluations during current period Other changes in the volume of assets during current period Position at end of current period						
All issuers		Position at end of previous period Net acquisitions during current period Revaluations during current period Other changes in the volume of assets during current period Position at end of current period						

Table 9.27 Equity Securities Holdings for Resident Financial Corporations Subsectors in a “From-Whom-to-Whom” Framework by Residence and Resident Sector of Issuer

Issuer \ Holder	Central bank	Deposit-taking corporations except the central bank	Non-MMF investment funds	Insurance corporations and pension funds	Other financial corporations
Residents					
Nonfinancial corporations					
Of which: Listed shares					
Financial corporations					
Of which: Listed shares					
General government					
Nonresidents					
Of which: Listed shares					

detailed analysis of the relationship between issuers and holders. It shows the equity securities holdings of the five main components of the financial corporations sector. For each category, holdings are broken down on the basis of the issuer's place of residence and resident sector. Depending on the availability of data, different degrees of detail could be shown.

9.72 For financial stability purposes, a more detailed breakdown of equity securities holdings is required, with data for individual issuers. As a first step, a breakdown of investors in the equity securities of individual issuers by financial corporations subsector (e.g., money-issuing corporations, insurance corporations, pension funds, and non-MMF investment funds) may be useful. Thereafter, issuer-by-issuer data may be required for systemically relevant investors such as large and complex financial and nonfinancial groups, consolidated on a group basis.

Presentation Tables with Global Aggregates for Securities

Presentation Tables with Global Aggregates for Debt Securities

9.73 Global aggregates for debt securities are essential in the light of the recent financial crisis and its spread through economies and markets.

9.74 The Bank for International Settlements (BIS), the International Monetary Fund (IMF), the Organisation for Economic Co-operation and Development (OECD), the World Bank, the United Nations and, at the European level, Eurostat and the European Central Bank (ECB), all have experience in presenting area aggregates and some global aggregates. The methodology for presenting such aggregates is established and well-documented.

9.75 This subsection deals with the presentation of debt securities aggregates for the world as a whole and for different areas and countries. Consequently, it is mainly for the use of international or supranational organizations.

Global aggregates for debt securities holdings by country, issuing sector, market, currency, maturity, and interest rate

9.76 Table 9.28 shows global debt securities holdings according to six classifications: by country (or by group of countries), residence, resident sector, currency, maturity, and interest rate. The table includes the holdings of residents, which are not covered by the Coordinated Portfolio Investment Survey (CPIS).

9.77 The holding sectors are nonfinancial corporations, financial corporations, general government, and households including NPISHs. These are broken down by currency, maturity, and interest rate.

Table 9.28 Debt Securities Holdings by Country, Residence, Resident Sector, Currency, Maturity, and Interest Rate

Debt securities held by residency, resident sector, currency, maturity, and interest rate	Resident holders									Nonresident holders			All holders		
	NFCs			FCs			GG								
	Currency	Maturity	Interest rate	Currency	Maturity	Interest rate	Currency	Maturity	Interest rate	Currency	Maturity	Interest rate	Currency	Maturity	Interest rate
Issuer residency															
Country A															
Country B															
Country C															
...															
Country Z															
All issuers (world)															

Note: NFC = nonfinancial corporations; FCs = financial corporations; GG = general government; HHs = households; NPISHs = nonprofit institutions serving households.

Table 9.29 Debt Securities Holdings and Issues by Country

Issuer residency	Holder residency					
	Country A	Country B	Country C	...	Country Z	All holders (world)
Country A						
Country B						
Country C						
...						
Country Z						
All issuers (world)						

Debt securities holdings and issues by country

9.78 Table 9.29 is a “from-whom-to-whom” table for debt securities holdings and issues with a breakdown of holders and issuers by country and by aggregated groups of countries.

9.79 Such a table with global aggregates requires national “from-whom-to-whom” data, which must be aggregated and reconciled. More detailed tables might show further breakdowns of debt securities by sector, currency, maturity, and interest rate.

9.80 Other breakdowns could show debt securities holdings of financial corporations or of deposit-taking corporations that represent claims on specific groups of countries, for example emerging economies and developing countries.

Debt securities holdings by currency denomination

9.81 Debt securities holdings may also be presented with a breakdown by major currency, as shown in Table 9.30. The currencies represented in the table

Table 9.30 Debt Securities Holdings in Major Currencies

Holdings of residents	Currencies				
	U.S. dollar	euro	Japanese yen	pound sterling	Other currencies
	Holdings by currency denomination				
United States					
Euro area					
Japan					
United Kingdom					
Other countries					
All holdings (world)					

Table 9.31 Equity Securities by Residence and Resident Sector of Holder and Residence of Issuer

Issuer	Holder		Residents						Nonresidents		All holders	
			NFCs		FCs		GG		HHs and NPISHs			
	Listed shares	Unlisted shares	Listed shares	Unlisted shares	Listed shares	Unlisted shares	Listed shares	Unlisted shares	Listed shares	Unlisted shares	Listed shares	Unlisted shares
Country A												
Country B												
Country C												
...												
Country Z												
All issuers (world)												

Note: NFCs = nonfinancial corporations; FCs = financial corporations; GG = general government; HHs = households; NPISHs = nonprofit institutions serving households.

are the United States (U.S.) dollar, euro, Japanese yen, pound sterling, and all other currencies.

Presentation Tables with Global Aggregates for Equity Securities

9.82 Global aggregates for equity securities are necessary in order to interpret the manner in which imbalances in equity markets could spread through economies and other financial markets.

9.83 This subsection deals with the presentation of equity securities aggregates for the world as a whole and for different areas and countries.

9.84 Table 9.31 shows equity securities holdings broken down by: (1) country (or country group); (2) place of residence; (3) resident sector; (4) currency; and (5) type of equity security.

9.85 The resident sectors in question are nonfinancial corporations, financial corporations, general government,

Table 9.32 Equity Securities Holdings and Issuance by Country of Residence

Issuers \ Holders	Country A	Country B	Country C	...	Country Z	All holders (world)
Country A						
Country B						
Country C						
...						
Country Z						
All issuers (world)						

and households and NPISHs. These are broken down further by type of equity security.

9.86 Table 9.32 is a “from-whom-to-whom” table for equity securities holdings and issuance, with holders and issuers broken down on the basis of country and aggregated groups of countries.

9.87 Such a table involving global aggregates requires national “from-whom-to-whom” data, which must be aggregated and reconciled. More detailed tables might show further breakdowns by sector or type of financial instrument.⁴

9.88 Other breakdowns could show equity securities holdings of the financial corporations sector as a whole or of deposit-taking corporations that represent claims on specific groups of countries, for example emerging economies and developing countries.

Reconciliation According to the Classifications by Issuer, Market, Currency, Maturity, Interest Rate, and Type of Share

9.89 To ensure consistency and accuracy, securities statistics should be reconcilable according to the various classifications developed in this *Handbook*—

⁴ For bearer securities (which account for the majority of equity securities, especially listed shares), it is usually impossible to compile a breakdown by country and sector for nonresidents. Although the exchange of data in the context of the CPIS enables some low-frequency position data to be compiled with breakdowns by counterpart country, even these mirror data do not usually offer full coverage (let alone consistency).

issuer, market, currency, maturity, interest rate, and type of share—as well as the relationship between positions and flows.

9.90 For debt and equity securities statistics classified by issuer, the following reconciliations should hold:

- All issuers = resident sectors + nonresidents
- Resident sectors = Nonfinancial corporations + Financial corporations + General government + Households and NPISHs
- Financial corporations = Central bank + Other money-issuing corporations + Securitization corporations + Other financial corporations
- General government = Central government + Other general government.

9.91 For debt securities statistics classified by market, the following reconciliation should hold:

- All markets = Domestic market + International markets.

9.92 For securities statistics classified by currency, the following reconciliation should hold:

- All currencies = Domestic currency + Foreign currencies.

9.93 For debt securities statistics classified by maturity, the following reconciliations should hold:

- All maturities = Short-term at original maturity + Long-term at original maturity
- Long-term at original maturity = More than one year and up to and including two years + More than two years and up to and including five years

+ More than five years and up to and including ten years + More than ten years

- Short-term at remaining maturity = Short-term at original maturity + Long-term at original maturity with a remaining maturity up to and including one year.

9.94 For debt securities statistics classified by interest rate, the following reconciliations should hold:

- All interest rates = Fixed interest rate + Variable interest rate
- Variable interest rate = Inflation-linked + Asset price linked + Interest rate-linked.

9.95 For equity securities statistics classified by type of share, the following reconciliations should hold:

- All shares = Listed shares + Unlisted shares
- All shares = Ordinary shares + Preferred shares.

9.96 For position and flow securities statistics expressed in terms of market value, the following reconciliations should hold:

- Net issues during current period = Gross issues during current period - Redemptions during current period

- Net acquisitions during current period = Gross acquisitions during current period - Disposals during current period

- Position at end of current period = Position at end of previous period + Transactions during current period + Revaluations during current period + Other changes in volume during current period.

Challenges

9.97 The presentation tables of types A, B, and C described herein facilitate comparability and consistency with international statistical standards. They contain information that countries may eventually wish to include in their national presentation of statistics on securities issues and holdings.

9.98 Ensuring consistency between the various presentation tables and describing the statistics with meta-data (see Annex 5) will nevertheless be challenging.

9.99 The advantages and disadvantages of developing SBS databases to facilitate the preparation of data as indicated in this part of the *Handbook* are of particular interest to compilers. These are briefly reviewed in Annex 4.



ANNEX

1

Comparing Market Value and Nominal Value for Debt Securities

A1.1 Annex 1 illustrates the relationship between market value and nominal value for positions in debt securities and the recording of the accrual and payment of interest for different types of debt security, namely (1) a fixed interest rate bond issued at par; (2) a fixed interest rate bond issued at a discount; (3) a zero-coupon bond; and (4) two types of index-linked bond.

Market Value and Nominal Value

A1.2 *Market valuation* is the key principle adopted by the 2008 SNA for valuing transactions and positions in debt securities. The market value is that at which debt securities are acquired or disposed of, between willing parties, on the basis of commercial considerations only, excluding commissions, fees, and taxes. In determining market value, trading parties also take account of accrued interest.

A1.3 *Nominal valuation* of debt securities reflects the sum of funds originally advanced, plus any subsequent advances, less any repayments, plus any accrued interest.

A1.4 At any specific point in time, the market value of a debt security may deviate from its nominal value owing to revaluations arising from market price changes. Movements in market prices arise from general market conditions, such as changes in the market interest rate; or specific circumstances, such as changes in the perceived creditworthiness of the issuer. For the following examples, it is assumed that all valuation changes are due to changes in the market interest rate, or in the prices of the underlying assets to which the bonds are linked.

A1.5 Thus, the following basic equation applies to positions in debt securities: Market value = Nominal

value + Cumulative revaluations arising from market price changes.

A Fixed Interest Rate Bond Issued at Par

A1.6 A fixed interest rate bond issued at par (1,000) at the beginning of the first year is repayable at maturity in five years and pays fixed coupons of 100 at the end of each year of its life. Interest accrues on the bond throughout the year and is recorded as being reinvested in the bond, increasing its nominal value from 1,000 to 1,100 at the end of the year, before the coupon is paid. Coupon payments on the existing fixed interest rate bond will not change, although the current market interest rate may change.

A1.7 At issue, the nominal value and the market value are both equal to 1,000, implying the market yield to be 10 percent. At the end of each year, interest of 100 has accrued and is paid by the bond issuer to the bondholder. The coupon payment of 100 by the debtor at the end of the year is treated as (partial) redemption of the bond, reducing its nominal value from 1,100 to 1,000.

A1.8 To illustrate the relationship between market value and nominal value and the recording of the flows associated with each of them, Table A.1.1 presents the annual stocks and flows during the life of the bond.

A Fixed Interest Rate Bond Issued Below Par

A1.9 In this second example, a five-year fixed interest rate bond repayable at maturity is issued at a discount (below par, at 900) and pays annual fixed coupons of 73.6 during its life, which, because of the discount,

Table A.1.1 - A Fixed Interest Rate Bond Issued at Par

Issue price: 1,000; annual coupon payments: 100; original maturity: 5 years; redemption price: 1,000. Stocks and flows during the life of the bond

	Start year 1	End year 1	End year 2	End year 3	End year 4	End year 5
Nominal value at year-end before coupon payment	1,000.0	1,100.0	1,100.0	1,100.0	1,100.0	1,100.0
after coupon payment		1,000.0	1,000.0	1,000.0	1,000.0	1,000.0
Accrued interest		100.0	100.0	100.0	100.0	100.0
Coupon payment		-100.0	-100.0	-100.0	-100.0	-100.0
Market value	1,000.0	969.0	1,025.3	1,054.2	982.1	1,000.0
Interest rate (per annum)	10.0	11.0	9.0	7.0	12.0	8.0
Cumulative revaluations arising from market price changes		-31.0	25.3	54.2	-17.9	0.0

Table A.1.2 A Fixed Interest Rate Bond Issued at Discount

Issue price: 900; annual coupon payments: 73.6; discount payment at redemption; original maturity: 5 years; redemption price: 1,000. Stocks and flows during the life of the bond

	Start year 1	End year 1	End year 2	End year 3	End year 4	End year 5
Nominal value at year-end before coupon payment	900.0	990.0	1,008.0	1,027.8	1,049.6	1,073.6
after coupon payment		916.4	934.4	954.2	976.0	1,000.0
Accrued interest		90.0	91.6	93.4	95.4	97.6
Due to coupon		73.6	73.6	73.6	73.6	73.6
Due to discount		16.4	34.4	54.2	76.0	100.0
Coupon payment		-73.6	-73.6	-73.6	-73.6	-73.6
Market value	900.0	887.1	958.5	1,006.5	958.6	1,000.0
Interest rate (per annum)	10.0	11.0	9.0	7.0	12.0	8.0
Cumulative revaluations arising from market price changes		-29.2	24.1	52.3	-17.4	0.0

correspond to a 10 percent rate of interest. This discount bond accrues interest on its nominal value of 10 percent, which is the market interest rate at the time of issuance. Part of the accrued interest (73.6) is paid to the bondholders as coupon at the end of each year, with the difference increasing the nominal value of the bond. At the end of the fifth year, the accrued interest due to the discount will add up to 100 and will be paid as part of the redemption price.

A1.10 As in the previous example, Table A.1.2 presents the annual stocks and flows during the life of the bond.

A Zero-coupon Bond

A1.11 In the third example, a zero-coupon bond which, by definition, pays no coupons during its life, is issued at a redemption price of 1,000, with an issue price of 620.9. The latter is the present value at issuance of the final payment at the end of the fifth year, when discounted (on an annual basis) at the current market interest rate of 10 percent.

A1.12 The only transactions to be recorded for this kind of bond, after its issuance, are the accruing of the discount throughout its life and the payment of the

principal at maturity. Changes in market interest rates will affect the bond's market value in the same direction as in the previous two examples, but with amplified effects owing to the longer duration of the bond.

A1.13 Table A.1.3 presents the annual stocks and flows during the life of the bond. At the end of the life of the bond, a transaction of 1,000 is recorded, corresponding to the repayment of 620.9 of principal and the payment of 379.1 of accrued interest.

Index-linked Bonds

Linked to the Consumer Price Index

A1.14 In the fourth example, an index-linked bond, repayable at maturity in five years, with annual coupon payments of 50 (five percent) on a principal of

1,000, is indexed to the consumer price index (CPI). The inflation expected over the life of the bond is assumed to be the inflation observed during the last 12 months. Changes in the CPI will affect the market value of the security through changes in its expected redemption price, discounted at the current market interest rate. The same market interest rate and market conditions as in the previous three examples apply to the case of this index-linked bond. At the time of issuance, the increase in the CPI during the previous 12 months was 5.5 percent. The bond is issued at par, with nominal value and market value equal to 1,000.

A1.15 Table A.1.4 presents the annual stocks and flows during the life of the bond. As can be seen in this table, the nominal value of the bond increases *pari passu* with observed inflation, while its market

Table A.1.3 A Zero-coupon Bond

Issue price: 620.9; implicit rate of return: 10 percent per annum; original maturity: 5 years; redemption price: 1,000. Stocks and flows during the life of the bond

	Start year 1	End year 1	End year 2	End year 3	End year 4	End year 5
Nominal value at year-end	620.9	683.0	751.3	826.4	909.1	1,000.0
Accrued interest due to discount		62.1	130.4	205.5	289.2	379.1
Market value	620.9	658.7	772.2	873.4	892.9	1,000.0
Interest rate (per annum)	10.0	11.0	9.0	7.0	12.0	8.0
Cumulative revaluations arising from market price changes		-24.3	20.9	47.0	-16.2	0.0

Table A.1.4 A Bond Indexed to the Consumer Price Index

Issue price: 1,000; annual coupon payments: 50; original maturity: 5 years; redemption price: 1,000; indexed to the CPI. Stocks and flows during the life of the bond

	Start year 1	End year 1	End year 2	End year 3	End year 4	End year 5
Nominal value at year-end before coupon payment	1,000.0	1,120.0	1,184.2	1,240.9	1,294.5	1,344.3
after coupon payment		1,070.0	1,134.2	1,190.9	1,244.5	1,294.3
Accrued interest due to coupon		120.0	184.2	240.9	294.5	344.3
due to indexation		50.0	50.0	50.0	50.0	50.0
Coupon Payment		70.0	134.2	190.9	244.5	294.3
Market value	1,000.0	50	50	50	50	50
Interest rate (per annum)	1,000.0	1,079.1	1,169.7	1,237.3	1,205.8	1,294.3
CPI (12-month changes, percentages)	10.0	11.0	9.0	7.0	12.0	8.0
CPI (index with year 1 as the base year)	5.5	7.0	6.0	5.0	4.5	4.0
Cumulative revaluations arising from market price changes	100.0	107.0	113.4	119.1	124.5	129.4
		9.1	35.5	46.3	-38.7	0.0

Table A.1.5 A Bond Indexed to the Gold Price

Issue price: 1,000; annual coupon payments: 100; original maturity: 5 years; redemption price: 1,000, indexed to the gold price Stocks and flows during the life of the bond

	Start year 1	End year 1	End year 2	End year 3	End year 4	End year 5
Nominal value at year-end before coupon payment	1,000.0	900.0	1,050.0	1,100.0	1,150.0	1,200.0
after coupon payment		800.0	950.0	1,000.0	1,050.0	1,100.0
Accrued interest		100.0	100.0	100.0	100.0	100.0
Coupon payment;		-100.0	-100.0	-100.0	-100.0	-100.0
Market value	1,000.0	837.2	986.7	1,054.2	1,026.8	1,100.0
Interest rate (per annum)	10.0	11.0	9.0	7.0	12.0	8.0
Gold price (domestic currency per troy ounce)	1,000.0	800.0	950.0	1,000.0	1,050.0	1,100.0
Cumulative revaluations arising from gold price changes		-200.0	-50.0	0.0	50.0	100.0
arising from market price changes		37.2	36.7	54.2	-23.2	0.0

value also reflects expected inflation and displays the same inverse relationship with the market interest rate as in the other examples. As the bond is linked to a broad index, changes in the value of the bond attributable to indexation are recorded as accrued interest, that is, as a transaction and not as a revaluation, while changes in its market value are recorded as revaluations.

Linked to the Gold Price

A1.16 The final example is a five-year bond paying an annual coupon of 100 (10 percent) on a principal of 1,000, which is indexed to the gold price. The expected redemption price is assumed to reflect the prevailing market price of gold. Changes in the gold price will affect the market value of the security via changes in the expected redemption price of the security, discounted at the prevailing market interest rate. The same market

interest rate and market conditions as in the previous four examples apply to this index-linked bond. At the time of issuance the gold price in domestic currency is 1,000 per troy ounce. The bond is issued at par with nominal value and market value equal to 1,000.

A1.17 Table A.1.5 presents the annual stocks and flows during the life of the bond. The nominal value of the bond reflects changes in the gold price and the accrual of interest. The market value of the bond reflects changes in the gold price and also the accrual of interest. In addition, the market value, as in the other examples, is inversely related to the market interest rate. The difference between the nominal value and the market value stems from revaluations arising from market price changes. As the bond is linked to a narrow index, changes in the value of the bond attributable to changes in the gold price are recorded as revaluations and not as transactions.

Structured Debt Securities

A2.1 Structured debt securities combine features of different financial instruments. They are part of a broader group of financial instruments called structured securities. Beyond structured securities, other financial instruments may exhibit features of a structured product, such as a structured deposit combining characteristics of a deposit and a financial derivative.

A2.2 Given the many possible combinations of financial instruments, a wide range of structured securities has evolved over time. This partly explains the absence of a standard international definition for structured securities and structured debt securities. This annex fills the gap by providing broad definitions of these financial instruments. It also lists the criteria that can be used to determine whether financial instruments should be classified as debt securities and hence included in statistics on debt securities.

Definition of a Structured Security

A2.3 Broadly defined, a structured security is a security derived from, or based on, a single security or financial derivative, a basket of securities or financial derivatives, an index, a commodity, or a foreign currency.

Criteria for Structured Securities

A2.4 Five criteria for classifying structured securities, based on their main features, are as follows.

- The *degree of principal at risk*. The principal may be: (1) protected and returned at maturity, regardless of the performance of the reference financial instrument; (2) exposed to losses limited to less than the full principal; (3) fully at risk subject to a level of initial loss protection; or (4) fully at risk.

- Variation in *investment returns* allows six different types of structured security to be distinguished: (1) “synthetic convertible,” where the investor receives a coupon plus potential appreciation on the underlying principal; (2) “reverse convertible,” where the investor receives a coupon and is exposed to potential depreciation of the underlying principal; (3) “dynamic allocation,” where the investment is algorithmically or dynamically allocated between assets during the life of the investment; (4) “periodic capped,” where the investment return is based on the sum of periodically measured returns on the underlying principal; (5) “target return,” where the investment is terminated once a certain return on the investment has been reached, and (6) “synthetic exposure,” where there is an economically similar investment to investing directly in the underlying principal.
- *Participation* characterizes whether the return is: (1) based on the initial and the final underlying levels—it does not include averaging over more than 10 percent of the term of the investment and the participation rate is fixed on the pricing date; (2) based on a periodic averaging for more than 10 percent of the term of the investment—the participation rate is fixed on the pricing date; (3) not fixed on the pricing date, but dependent on changes in the underlying principal; or (4) based on the change in the underlying principal with a ratio greater than one.
- *Type of coupon* might be: (1) variable, depending on the change in the underlying principal; (2) fixed and set on the pricing date; or (3) a minimum return in excess of the principal amount and set on the pricing date.

Table A2.1 Features of Structured Securities

		Degree of principal at risk			
		Protected	Partly protected	Fully at risk subject to a level of initial loss projection	Fully at risk
Investment return	Synthetic convertible Reverse convertible Dynamic allocation Periodic capped Target return Synthetic exposure				
Participation	Straight Averaging Variable Enhanced				
Type of coupon	Variable Fixed Minimum				
Type of call	Callable Auto-callable				

- *Investment* may be called from the investor: (1) at the issuer's option (callable); or (2) if a predetermined movement in the underlying principal occurs (auto-callable).

A2.5 Table A2.1 combines the five criteria for classifying structured securities. The degree of principal at risk criterion needs to be determined, as well as one of the remaining four criteria.

Definition of a Structured Debt Security

A2.6 Structured debt securities are defined as a subset of structured securities. Structured debt securities typically combine a debt security, or a basket of debt securities, with a financial derivative, or a basket of financial derivatives. These financial derivatives are typically embedded in and are therefore inseparable from the debt securities. Financial instruments in which the debt security component and financial derivative component are separable from each other should be classified as separate financial instruments.

A2.7 Debt securities with embedded financial derivatives are classified as debt securities in cases where

the debt security and financial derivative components cannot be separated and the debt security is the primary characteristic (*BPM6*, paragraph 5.83 (d)).

A2.8 An example of a structured debt security is a credit-linked note (CLN) that combines a credit derivative and a conventional bond. Another example is a structured variable rate note (VRN), as a variation of a standard variable rate bond whose coupon payment is periodically reset by reference to an independent interest rate index such as the London interbank offered rate (LIBOR). The structured issue includes a derivative that allows the coupon calculation to be tailored to meet investors' interest rate expectations. For example, there may be an interest rate collar or band. A third example is a VRN that has a put option for the holder to sell the issue back.

Types of Structured Debt Securities

A2.9 Using the degree of principal at risk as a primary criterion, and the type of investment return and participation as secondary criteria, four types of structured debt security can be identified. Each type is described below.

- *Principal-protected products* are constructed in such a way that the capital initially invested is guaranteed from the investor's point of view. These products offer the full downside protection of a debt security while having the upside potential of an equity security. Investors typically give up a portion of the equity security appreciation in exchange for principal protection. As such, products that usually combine a debt security with one or more options should be classified as debt securities.
- *Yield-enhanced products* are designed to achieve a maximum return on investment. Accordingly, the principal is only partially protected, buffered at risk, or fully at risk. Such products offer a greater upside potential than principal-protected products but do not guarantee the full return of principal. They are partly exposed to any decline in the underlying investment below a buffer zone. Such products typically combine a debt security and a put or call option. They should be classified as debt securities.
- *Participation products* derive their value from different types of security. Depending on the underlying securities, these products should be classified as debt securities, equity securities, or investment fund shares or units.
- *Leveraged products* with a large risk compared with the initial investment combine an investment in an underlying security with a future or option. Even if the initial investment is small compared with the expected risk, leverage products should be classified as debt securities.



ANNEX

3

Islamic Securities

Islamic Finance

A3.2 Islamic finance is governed by Islamic rules and principles (Shari'ah), which—among other things—prohibits usury (Riba); including predetermined returns on borrowed funds for specific terms. The Shari'ah also forbids investment in businesses that provide goods and services considered contrary to its principles (Haraam), such as gambling. Nonetheless, Islamic finance encourages trading and business, mainly through risk and profit sharing participation in permitted activities.

A3.3 In view of the prohibition of Riba, Islamic finance uses financial instruments that either:

- Are backed by returns from a real asset and earn a variable rate of return tied to the performance of the asset; or
- Offer returns that are unspecified before the investment is made but shared based on a pre-agreed ratio on actual earnings.

A3.4 Islamic finance has progressed and expanded its business activities from offering basic alternatives to conventional interest-bearing accounts and loans, to include Islamic capital markets and Islamic insurance services (Takāful).¹

International Statistical Standards

A3.5 The 2008 SNA classification scheme for financial instruments can provide additional detail to include special categories for statistics on Islamic financial

instruments. The *Monetary and Financial Statistics Manual (MFSM)* suggests that Islamic debt securities consist of various investment participation certificates that have the characteristics of negotiable securities and are not investments in the permanent capital of the issuer.² Included in this category are the most negotiable investment certificates, which are recorded as liabilities of the issuer. The *MFSM* also indicates that Islamic shares and other equity include various investment participation certificates that are part of the permanent capital of a financial institution, or are clearly representative of a partnership between an investor and a financial corporation.

Sukūk

A3.6 In Muslim and non-Muslim countries, various organizations issue Shari'ah-compliant participation certificates or securities, frequently referred to as Sukūk (plural of Sakk). According to the Islamic Financial Services Board (IFSB),³ Sukūk are defined as certificates with each sakk representing a proportional undivided ownership right in tangible assets or a pool of predominantly tangible assets, or a business venture (such as Mudārabah). These assets, which must be clearly identifiable, may be related to a specific project or investment activity in accordance with Shari'ah rules and principles. Issuance of Sukūk, including the utilization of funds raised through such issuance, should not involve any elements of interest (Riba), excessive uncertainty (Gharar), or activities prohibited by Shari'ah. In most cases, it would require a Shari'ah Board to advise and supervise on Shari'ah compliance aspects of the Sukūk.

¹Several Islamic banking products, such as the Profit Sharing Investment Account (PSIA), have features of a mutual fund. This indicates that the scope of services available in Islamic finance extends beyond the provision of a single industry product. The cross-sector nature of Islamic finance, however, has created some uncertainties in classifying them either as debt or equity instruments.

²The forthcoming *Monetary and Financial Statistics Manual and Compilation Guide* provides guidance on the treatment of Islamic financial instruments.

³IFSB-7, *Capital Adequacy Requirements for Sukūk, Securitisations and Real Estate Investment*, paragraph 8.

A3.6 Sukūk differ from conventional debt securities or bonds in a number of ways, including:

- The funds raised through the issuance of Sukūk should be applied to investment in specified assets rather than for general unspecified purposes. This implies that identifiable assets should provide the basis for Islamic bonds.
- Since the Sukūk are based on the underlying non-financial assets, income from the Sukūk must be related to the purpose for which the funding is used.
- The Sukūk certificate represents a proportionate ownership right over the assets in which the funds are being invested. The ownership rights are transferred, for a fixed period ending with the maturity date of the Sukūk, from the original owner (the originator) to the Sukūk holders.

A3.7 The tradability of the Sukūk is dependent on the structure of the Sukūk, as the Shari'ah generally prohibits the sale of debt at a discount.⁴ For example, one of the mechanisms to trade Sukūk at a variable price is when the Sukūk use a lease (Ijārah⁵) structure whereby the lease rentals can be changed or revised from time to time.

Criteria for Distinguishing Islamic Debt Securities and Equity Securities

A3.9 There are two categories of criteria that distinguish Islamic debt securities from equity securities. The first category comprises criteria that are used to differentiate conventional debt securities and equity securities.

- A debt security represents indebtedness or borrowing by the issuer, while an equity security represents partial ownership in the issuing corporation.
- A debt security holder has first claim, ahead of equity holders, in the event of liquidation of a corporation.

⁴In most jurisdictions, it is not considered permissible to securitize debt claims or other receivables for the purpose of issuing tradable Sukūk. In most jurisdictions, Shari'ah scholars require that, to be tradable, Sukūk must not represent receivables or debts, except in the case of a trading or financial entity selling all its assets, or a portfolio with a standing financial obligation, in which some debts, incidental to physical assets or usufruct, were included unavoidably.

⁵An Ijārah contract refers to a contract to lease a specified asset for an agreed period against specified installments of lease rental.

- A debt security offers a holder a fixed or variable rate of return over its life and the principal at redemption, while an equity security may offer its holder a variable dividend depending on the profitability of the issuing corporation.
- A debt security (except a perpetual debt security) usually has a maturity date, while there is no maturity date for an equity security.
- A debt security is usually rated for the risk of credit default, while an equity security is not.
- A debt security is usually issued and exchanged in the "over-the-counter" market, while an equity security is usually issued and transferred on an exchange.

A3.10 The second category comprises additional criteria that are used to distinguish Islamic debt securities from Islamic equity securities.

- All Islamic equity securities are negotiable in the secondary market but, depending on the nature of the contract, not all Sukūk are negotiable. For example, Murābahah⁶ is based on a cost-plus contract and hence are generally not transferable except at their face value, as the Shari'ah rules and principles prohibit the sale of debt at a discount.
- A credit rating of Sukūk backed by a guarantee must ensure that the institutional unit providing the guarantee is not related to the issuer. In this case, the Sukūk issuer is allowed to apply a third-party guarantee on the capital invested under the principles of Mudārabah⁷ or Mushārahah.⁸

⁶A Murābahah contract refers to a contract to sell a specified asset at an agreed profit margin plus cost (selling price), whereby the cost and profit margin shall be disclosed. The asset must be under complete ownership of the seller.

⁷A Mudārabah is a partnership contract between the capital provider (Rabbu al-Māl) and an entrepreneur (Mudārib) whereby the capital provider would contribute capital to an enterprise or activity, which is to be managed by the entrepreneur. Profits generated by that enterprise or activity are shared in accordance with the percentage specified in the contract, while losses are to be borne solely by the capital provider unless the losses are due to the entrepreneur's misconduct, negligence or breach of contracted terms.

⁸A Mushārahah is a partnership contract in which the partners (Shuraka', sing: Shārik) agree to contribute capital to an enterprise, whether existing or new, or towards the ownership of an asset, either on a temporary or permanent basis. Profits generated by that enterprise or asset are shared in accordance with percentage specified in Mushārahah agreement, while losses are shared in proportion to each partner's share of capital.

- Equity securities issued by corporations that conform to specific Shari'ah criteria can be classified as Shari'ah compliant. In contrast, conventional bonds, by default, are classified as non-Shari'ah compliant—hence, the need for Sukūk.
- Shares have the risk of becoming Shari'ah non-compliant if the corporation enters into new ventures or engages in transactions that breach the criteria set under Shari'ah rules and principles.

Sukūk Securitization

A3.11 Sukūk securitization is the financial engineering process for the creation and issuance of Sukūk, where:

- Payment of principal and income is derived from the cash flows generated by the securitized assets, or by the pool of assets that underlie the issuance of the Sukūk; and
- Ownership of the underlying assets is transferred to the investors in the form of Sukūk.

A3.12 Contrary to conventional securitization, where collateral rights are transferred to the bondholders, Shari'ah-compliant securitization involves ownership rights in the underlying assets being transferred to Sukūk holders. The ownership of the securitized assets is transferred to a special purpose entity (SPE) set up to manage the assets on behalf of the Sukūk holders and to issue the Sukūk. The contractual terms of the Sukūk issuance determine the rights of the Sukūk's investors in relation to the securitized assets, which are usually the rights of legal ownership, via an SPE.

A3.13 For such transfer of assets to hold legally, there must be an agreement, that is, evidence of a binding sale transaction from the originator to the SPE and subsequently to Sukūk investors; in other words, such a contract must be valid, binding, and legally enforceable on all parties involved. With this sale transaction, the investors will become legal owner of the assets underlying the Sukūk transaction, with all of the rights and obligations that accompany actual ownership. The SPE must be “bankruptcy remote” from the originator. Thus, upon the insolvency of a Sukūk originator, the underlying assets cannot be clawed back into the bankruptcy estate of the originator. In such Sukūk, Sukūk holders have no recourse to the originator; their only recourse is to the underlying assets.

A3.14 In many jurisdictions, including some in which Sukūk issuances may take place, there may be legal obstacles to setting up an appropriate type of SPE that can meet the conditions for the fiduciary responsibilities. In such legal environments, it may not be possible to transfer legal title in the underlying assets to the investors, or to ensure that the investors are able to exercise these rights in the event of default. Such cases can arise, among others, in the Sukūk issued by some sovereigns and national monetary authorities where the laws applicable in the jurisdiction restrict the legal transfer of national assets to certain types of investors.⁹ In such cases, the Sukūk issuer usually grants beneficial ownership of assets to the Sukūk holders.

A3.15 The assets in Sukūk securitization structures must comply with Shari'ah rules and principles. The underlying assets to be securitized generally comprise properties that generate lease incomes. However, the underlying assets may also comprise a portfolio of assets combining different categories of contracts, for example, Ijarah leased assets, Murābahah or Salam¹⁰ receivables, Istisnā¹¹ assets, Wakalah¹² (agency) arrangement, or equity ownership (Musharakah or Mudārabah). Sales-based Sukūk structures, such as Murābahah and Salam, are not negotiable. Business ventures organized as Musharakah or Mudārabah partnerships may also be securitized, resulting in Sukūk that are negotiable.

Sukūk Structures

A3.16 Based on the commercial terms and legal structure of a Sukūk securitization, the IFSB discusses three situations:¹³

⁹Sukūk in which legal ownership of the underlying assets is not transferred to the Sukūk holders for the reasons cited in the text are commonly termed “asset-based” Sukūk in the market. On the other hand, Sukūk structures that transfer the legal ownership of underlying assets to the Sukūk holders are termed “asset-backed” Sukūk.

¹⁰A Salam contract refers to a contract to purchase an asset where the price, quantity and quality are specified to be delivered in the future.

¹¹An Istisnā contract refers to a contract to order the manufacturing of an asset according to the buyer's specifications at a predetermined selling price. The payment of the price and delivery of the asset will be on a specified future date.

¹²Under Wakalah, the holder appoints the beneficiary of funds as their agent to perform certain business operations. Depending on the underlying assets, these contracts are negotiable.

¹³IFSB-7, paragraph 10.

- An asset-backed structure. This structure would leave the holders of Sukūk to bear any losses in case of the impairment of the assets. The applicable risks are those of the underlying assets, and these will in principle be reflected in any credit rating issued by a recognised external credit assessment institution (ECAI).
- An asset-based structure with a repurchase undertaking (binding promise) by the originator. The issuer purchases the assets, leases them on behalf of the investors, and issues the Sukūk. Normally, the assets are leased back to the originator in a sale-and-lease-back type of transaction. The applicable credit risk is that of the originator, subject to any Shari'ah-compliant credit enhancement by the issuer. Such structures are sometimes referred to as "pay-through" structures, since the income from the assets is paid to the investors through the issuer.
- A so-called "pass-through" asset-based structure. A separate issuing entity purchases the underlying assets from the originator, packages them into a pool and acts as the issuer of the Sukūk. This issuing entity requires the originator to give the holders recourse, but provides Shari'ah-compliant credit enhancement by guaranteeing repayment in case of default by the originator.

Islamic Debt Securities Classification

A3.16 The sector and subsector classifications in existing international statistical standards, such as the 2008 SNA, also apply to Islamic debt securities. Institutional units in the following sectors and subsectors usually issue Islamic debt securities: general government, financial corporations, and nonfinancial corporations. The IFSB also suggests that Sukūk can be classified by type of underlying contracts, as mentioned previously. Most of the other classifications applied to conventional debt securities, that is, currency, maturity, and market, may also be applied to Islamic debt securities.

A3.17 With regard to classification by interest rate, as noted earlier, Shari'ah rules and principles prohibit usury (Riba), including predetermined returns on borrowed funds for specific terms. Furthermore, some Sukūk structures, such as Musharakah or Mudarabah, may not reflect the exact variation in the

real return from the business venture. Therefore, the returns cannot be predetermined at the time of issuance. This situation makes the pricing of these securities difficult, as does the lack of benchmark profit rates and the diverse types of Sukūk structures. Thus, in order for the Sukūk pricing mechanism to be efficient and credible, further initiatives need to be undertaken to develop benchmark indicators. For example, if the Sukūk issuance is based on the Ijarah principle, whereby a property is used as its underlying asset, the actual rate of return on the underlying asset may be used to determine the rate of return of the Sukūk. The price of the Sukūk would then fluctuate in line with the supply and demand in the market for that underlying asset.

Shari'ah-Compliant Equity Securities

A3.18 Any equity security can be classified as Shari'ah-compliant if the corporation's activities are not related to noncompliant business activities or its participation is below the financial ratios outlined by applicable Shari'ah rules and principles. Some examples of non-compliant business activities include:

- Conventional financial services (because of interest)
- Conventional insurances (because of uncertainty)
- Alcohol or pork-related products (including producers, distributors, and stores)
- Gambling or defense related activities.

A3.19 Given the dominance of interest-based conventional financial systems, however, it is not practically feasible for most corporations to avoid transactions associated with interest or other kinds of prohibited activities, even if those are not part of their primary business activities. In this environment, finding an equity security that is 100 percent Shari'ah compliant could be difficult. Thus, in order to identify Shari'ah-compliant equity securities, various jurisdictions and institutions employ the Shari'ah screening process.

A3.20 Two categories of Shari'ah screening processes are generally used to ensure compliance with the requirements of Shari'ah: qualitative and quantitative screening. Qualitative screening is often called *sector screening* and quantitative screening is referred to as *financial ratio screening*. The former is the process

through which corporations' core business relating to prohibited business activities is examined. The latter refers to the process whereby corporations involved in mixed activities and nonpermissible financial practices are identified and excluded if the applicable ratios exceed certain prescribed thresholds. The financial ratios commonly applied as quantitative criteria include debt ratio, interest ratio, cash and liquidity compliance ratio, and nonpermissible income ratio. The quantitative screening process also tests the negotiability of shares from the Shari'ah perspective.

Islamic Collective Investment Scheme

A3.21 An Islamic Collective Investment Scheme (ICIS) can be any collective investment scheme that is claimed to be established and managed in accordance with Shari'ah rules and principles. Sometimes it is referred to as an Islamic unit trust, Islamic mutual fund, or Islamic investment fund, depending upon the jurisdiction. Depending on the subject of the investment, an ICIS is also referred to as an Islamic real estate investment trust or Islamic exchange traded fund.

A3.22 The IFSB, under IFSB-6,¹⁴ defines ICIS "as any financial scheme which, fundamentally, meets ALL the following criteria:

- investors have pooled their capital contributions in a fund (whether that fund is in a separate legal entity, or is held pursuant to a contractual arrangement) by subscribing to units or shares of equal value. Such units or shares constitute, in effect, claims of ownership to the undivided assets of the fund (which can consist of financial or nonfinancial assets), and give rise to the right or obligation to share in the profits or losses derived from those assets;
- the fund is established and managed in accordance with *Shari'ah* rules and principles; and
- whether or not the ICIS is managed by the institutions that established or sponsored it, it is separately financially accountable from those institutions (i.e., has its own asset-and-liabilities profile)."

¹⁴IFSB-6, "Guiding principles on governance for Islamic collective investment schemes" issued by IFSB in January 2009.

A3.23 An ICIS may take the form of:

- Open-ended funds that redeem their units or shares, whether on a continuous basis or periodically
- Closed-end funds, whether those units or shares are tradable (in regulated or unregulated securities market) or untradeable
- A unit investment trust, either based on a contractual model or on a European undertaking for collective investment in transferable securities (UCITS) model
- An individual fund, or an umbrella fund that comprises various sub-funds
- A profit-sharing investment account (either restricted or unrestricted), which is pooled in the form of a CIS and whereby each of the investment account holders (IAH) participate equally in income (whether profit or loss) and is generally governed by the same terms and conditions.

A3.24 IFSB-6 excludes the following types of funds from the definition of an ICIS:

- Funds that are not pooled in the form of collective investment schemes
- Funds established by Islamic insurance operators (if they are attached to any Islamic insurance policy such as retirement or education plans that are irredeemable until a certain period of maturity), as they constitute a different segment of the Islamic financial services industry and will be addressed by the IFSB in specific standards for Islamic insurance operators
- Pension funds, as they are arguably a different species from ordinary collective investment schemes
- Investment accounts that are not divided into units or shares.

A3.25 Considering that the offering of any ICIS is fundamentally conditional to its promise to be in compliance with Shari'ah rules and principles, the Shari'ah governance system usually caters to the following processes:

- Monitoring consistent compliance with the Shari'ah rules and principles in the daily operations of the ICIS

- Portfolio screening to ensure its investment portfolios remain within Shari'ah-permissible assets and projects
- Purification of tainted income, whereby income that is contaminated by prohibited elements is removed from the ICIS and transferred to charity organizations.

Islamic Index

A3.26 An Islamic index is a financial index in which constituents are Shari'ah-compliant equities or Sukūk. Global Islamic index providers derive the base of constituent stocks for their Islamic indices from the universe of stocks for their respective conventional equities. Thus, if a particular equity is excluded from parent indices, it will be automatically removed from Islamic indices irrespective of Shari'ah-compliance considerations. Shari'ah scholars represent geographical diversity in all index providers, ensuring school neutral, objective views on Shari'ah interpretations.

Most of these index providers use industry classification code for the screening process.

A3.27 Islamic indices offer benchmarks for the performance of Islamic as well as conventional investments that are Shari'ah compliant. Islamic indices also required the development of the Shari'ah screening process to identify which corporations are Shari'ah compliant and should be included in such indices. Investors may use screens as a proxy for their own assessment of the compliance of any particular instrument with Shari'ah principles.

A3.28 The first global Islamic index was the Dow Jones Islamic Market Index introduced in March 1999, followed by the Financial Time Stock Exchange (FTSE) Shari'ah-compliant index in October 1999. Globally, there are six major index providers that offer Islamic equity indices: Dow Jones Indices (DJI), FTSE, Morgan Stanley Capital International (MSCI), Russell, Standard & Poor's (S&P), and Thomson Reuters (TR).

Security-by-Security Databases

What Is a Security-by-Security Database?

A4.1 A security-by-security (SBS) database is a micro-database that stores statistics at an individual security level.¹ Statistics are stored according to a range of attributes or characteristics that may vary depending on the purpose of the database. For statistical uses, the attributes may include the International Securities Identification Number (ISIN) (or the identification number according to some other schemes, since SBS databases cannot store securities without codes); the issuer's name, residence, sector, and subsector; the issue date; redemption date; type of security; currency of denomination; issue price; redemption price; outstanding amount or market capitalization; and the coupon payments and dates (see Figure A4.1).

A4.2 The production of statistics from SBS databases can be presented as a three-stage process (see Figure A4.2).

- First, statistics on individual securities are collected and purchased from a range of sources, such as central banks, government agencies, commercial data providers, and securities exchanges (data input).
- Second, the individual security data collected from different sources are added to the database, merged, and stored. Checks for completeness, plausibility, and consistency are then performed

and, where errors are detected, observations are corrected (data quality management).

- Third, individual security data are stored according to various classification criteria.

Link to Securities Holdings Statistics

A4.3 SBS databases can be linked to securities holdings statistics for resident holders grouped by sector and subsector, as well as for nonresident holders. For that purpose, information provided by respondents is linked at the individual security level to the data stored in the SBS database. The link is often made using the ISIN, but also referring to information on the securities holders and holdings: (1) the holder by residence and institutional sector and subsector, and also by large and complex financial or nonfinancial groups; and (2) the amount of holdings in currency.

A4.4 At least two levels of access should be distinguished, namely access to raw data for statisticians and access to more aggregated data for users, for instance to compile sectoral financial accounts and financial balance sheets.

A4.5 Current reporting schemes on securities holdings are mainly based on two groups of agents having access to information on securities holdings: (1) custodians (as well as centralized securities depositories); and (2) direct reporters. In most cases, data are collected from custodians on an SBS basis. Data on the debt securities holdings of residents are also collected from nonresident custodians to allow the breakdown of holdings by the residence of the issuer to be estimated.

A4.6 Direct reporters provide SBS data on their holdings with various breakdowns: by type of instrument, maturity, and residence of issuer, for example. There may be a legal obligation in some countries for

¹SBS databases may include statistics covering various categories of financial instrument, such as debt securities, equity securities, investment fund shares or units, and financial derivatives. A prominent example of an SBS database is the Centralised Securities Database (CSDB) set up by the European System of Central Banks (ESCB). The description of the CSDB in this annex is mainly based on ESCB's experience.

Figure A.4.1 Attributes of Statistics Stored in SBS Databases

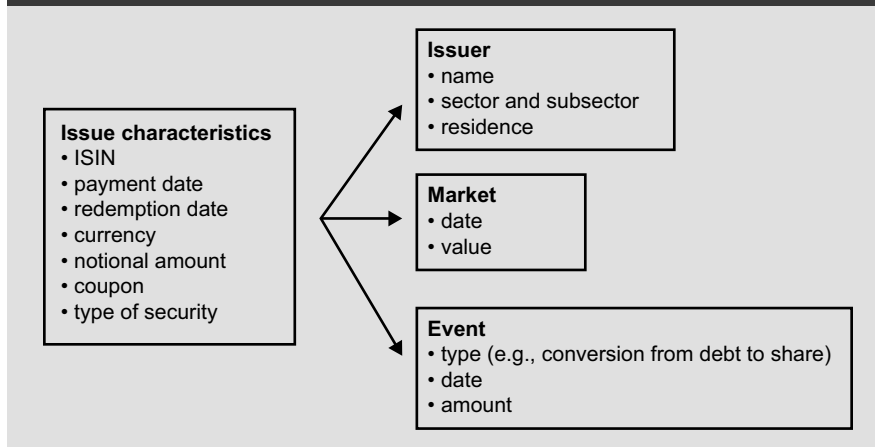
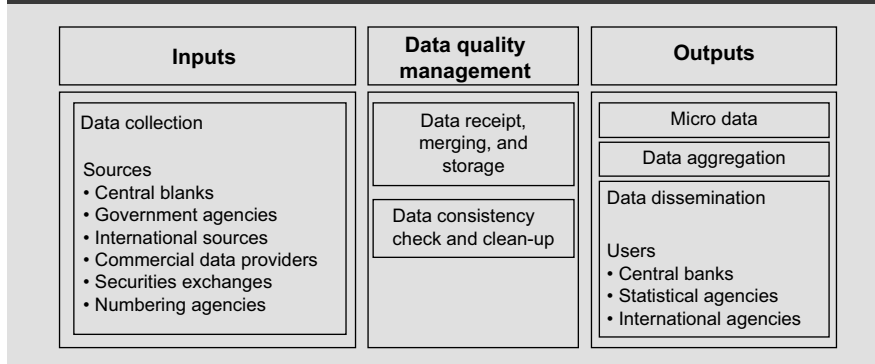


Figure A.4.2 Stages in the Development of SBS Databases



residents to report their securities held in custody abroad. However, there is usually a limited coverage of data collected directly from specific sectors or subsectors, like households and nonprofit institutions serving households (NPISHs).

A4.7 When deciding whether to construct an SBS database linked to securities holdings statistics, the full range of benefits and costs needs to be considered.

SBS Databases for Equity Securities

A4.8 SBS databases for equity securities are somewhat different from SBS databases for debt securities. Equity securities do not have a maturity date and there is no obligation on the issuer to pay the holder a predetermined amount.

A4.9 Maintaining an SBS database for equity securities may be challenging for various reasons. These relate predominantly to:

- The compilation of market prices for listed shares, particularly multiple listings, and the procurement of up-to-date market prices from various (typically inconsistent) data sources, with a considerable impact in terms of resources (high data frequencies and resource-intensive inputting and quality management)
- The establishment of hierarchical links between individual equity securities and the relevant depository receipts, as well as secondary/dual listings
- The handling of deviating price formats (percentage prices) when valuing share positions

(e.g., in the case of “Genußscheine,” also called “Genußrechte”)

- The effective and timely integration of corporate events (e.g., capital increases/reductions, liquidations, and stock splits) into a micro-level database
- The handling of unlisted shares in an SBS database, typically with limited information on outstanding shares and comparable prices from the various data sources.

A4.10 Statistics stored in SBS databases should enable each individual security to be identified and provide sufficient information to allow securities statistics to be compiled (e.g., the ISIN code, name and sector of the issuer, type of security, issue date). Moreover, information on certain parameters (e.g., the date of the initial public offering (IPO)/listing, details of previous issuance of bonus shares or stock splits, or historical information on dividends payable) may also be relevant for the purposes of monetary and fiscal policy, and financial stability analysis.

A4.11 Aggregated time series (i.e., equity securities issued by a given sector) can only be derived from an SBS database if time series for each individual security are available.

Benefits and Costs

A4.12 When deciding whether to construct an SBS database, the full range of benefits and costs should be considered. Most of the arguments for and against SBS databases relate to the compilers of securities statistics, although respondents and users are also affected.

A4.13 One of the main advantages of SBS databases is that compilers, rather than respondents, are responsible for the statistical classification of securities. This promotes accuracy and consistency of the data, and adherence to international statistical standards. For statistical purposes, particularly in cases of statistics on securities issues, government finance statistics, and institutional sector accounts, individual SBS issues data are usually aggregated according to various statistical categories. SBS databases offer the flexibility to produce different aggregates based on SBS data, with no need for any further data collection. Moreover, SBS databases allow data to be derived on positions,

transactions, and other flows. SBS databases also allow quality checks at a very detailed level to detect outlier observations within specific statistical categories. Outliers may indicate a misclassification but they can also be caused by financial innovation, which would require further investigation and potentially an amendment to the statistical aggregation categories.

A4.14 SBS databases benefit respondents by reducing the amount of detailed breakdowns to be reported to compilers. Respondents no longer need to map their internal data into statistical reports and instead provide relevant information for each individual debt security in their database. A drawback for respondents, however, is the necessity to meet the data standards agreed upon with compilers.

A4.15 SBS databases can be extended to include information on securities holdings for resident holders grouped by sector and subsector, as well as for non-resident holders. For that purpose, the information provided by respondents is linked at the individual security level to the data stored in the SBS database. The link is often done by using the ISIN.

A4.16 From the user’s perspective, there may be interest in detailed disaggregated data or in combining different classifications, particularly as debt securities markets become more complex and globalized. SBS databases enable this decomposition in debt securities statistics. Sometimes a panel of individual securities data may be set up to analyze common developments. SBS databases also permit an analysis of the financing of different sectors, the size of different market segments, or the importance of different debt securities. The databases allow users to track changes in the credit ratings, prices, and liquidity of individual securities and issuers.

A4.17 SBS databases can, in conjunction with statistics on securities holdings, significantly improve the quality of monetary, financial, balance of payments, and international investment position statistics, as well as financial accounts and financial balance sheets. Such databases are also useful for the purpose of estimating revaluations and other changes in the volume of assets and liabilities by type of financial instrument. They can be used to construct detailed “from-whom-to-whom” tables providing important information on linkages within the economy and may also be required when collecting and compiling datasets for

systemically relevant investors (e.g., large and complex financial groups). Confidentiality issues may have to be addressed where issuance and holdings of equity securities are presented with fairly detailed breakdowns (e.g., with details of securities held by central banks).

A4.18 At the same time, there are significant costs for compilers in setting up and maintaining SBS databases and adapting them to changes in users' needs. Human, financial, and information technology resources need to be found. SBS databases are largely sourced from commercial database providers and there are administrative expenses related to setting up contracts with these providers for regular reporting or to conduct surveys.

Acquiring this information is therefore expensive and it can often be incomplete. However, a minimum level of data quality is needed, such as a full coverage of specific categories of securities, and some manual intervention is necessary to crosscheck corresponding data received from the various data providers. Information technology costs for database storage and processing are significant. This reflects the complexity of SBS databases from an operational and methodological perspective, the large volumes of statistics stored in them, and database management costs shifting to compilers from respondents. Finally, there can be legal obstacles preventing data exchange between central banks, statistical agencies, and other authorities.



ANNEX

5

Metadata for Debt and Equity Securities Statistics

A5.1 Annex 5 presents guidelines on metadata for debt and equity securities statistics. These metadata complement the statistics presented in the tables in Chapter 9. While quantitative information is useful for assessing the financing activity of residents and nonresidents across securities markets, it is not sufficient in itself to support a comprehensive analysis, particularly when comparing national data and constructing global aggregates.

A5.2 To properly assess securities markets and produce comparable statistics, additional information is required. This reflects, among other things, the range of data sources used to construct securities statistics, the various accounting rules under which the data can be produced, and the regulations governing debt securities issuance.

A5.3 There are no specific international guidelines for metadata on debt and equity securities statistics. This *Handbook* represents a first attempt to fill this gap.

A5.4 This annex recommends the presentation of three groups of statistical metadata. The first group is specific to securities statistics and covers information on the regulatory and supervisory environment in which securities are issued in domestic and international markets, as well as on market arrangements. There are two additional groups of metadata:¹

- Statistical metadata items that are shared by all financial statistics, and hence by debt and equity securities statistics
- General statistical metadata items shared by all types of statistics.

A5.5 Any type of metadata can be specific to an individual series or can be attached to a whole group of statistical series. An example of metadata for securities time series is shown in this annex. It demonstrates the type of information that can be included in metadata for securities statistics.

Specific Statistical Metadata Items for Debt and Equity Securities Statistics

Regulatory and Supervisory Environment

A5.6 Each country has developed its own set of regulations governing the issue of debt and equity securities. These regulations are designed to satisfy specific national requirements that have evolved over time and are developed and monitored by a range of national agencies. To enhance the comparability of securities statistics, it is crucial that a basic set of information on the regulatory environment is presented with the quantitative statistics. Metadata on the regulatory environment could include:

- Main domestic and international regulations governing the operation of debt and equity securities markets
- Names of the regulatory organizations responsible for governing debt and equity securities markets
- Listing and numbering requirements of issuers of debt and equity securities
- Disclosure requirements for issuers of debt and equity securities
- Accounting rules for recording the issuance and trade of debt and equity securities.

¹ The International Monetary Fund (IMF) has developed the Data Quality Assessment Framework (DQAF), which covers several metadata items that are listed among the two groups of statistical metadata that are not specific to securities statistics. The DQAF is used to assess the quality of countries' economic and financial data. It focuses on certain features of the governance of authorities producing statistics, as well as the processes to produce statistical indicators and the quality of those indicators. Based on the United Nations Fundamental Principles of Official Statistics, it is the result of extensive consultation with national and international statistical authorities and data users.

Market Arrangements

A5.7 The coverage of securities statistics may also vary across economies owing to differences in market operations and arrangements. Metadata on market information could include trading, clearing, and settlement arrangements for debt and equity securities.

Statistical Metadata Items Shared by All Financial Statistics

A5.8 In addition to the corresponding specific statistical metadata items, debt securities statistics should also take advantage of metadata that are already used in existing databases containing financial statistics. In the metadata listed below, each statistical item is followed by the categories recommended by this *Handbook*.

Debt securities

A5.9 Metadata for debt securities statistics should include information relating to the classifications in the detailed tables in Chapter 9, including:

- Issuer sector: all sectors, nonfinancial corporations, financial corporations, general government, households and nonprofit institutions serving households (NPISHs), or nonresidents
- Issue currency: all currencies, domestic currency, or foreign currencies
- Issue market: all markets, domestic markets, or international markets
- Maturity: all maturities, short-term maturities, or long-term maturities
- Term to maturity: original maturity or remaining maturity
- Interest rate: all interest rates, fixed interest rates, or variable interest rates
- Variable interest rates: all variable interest rates, inflation-linked, asset price-linked, or interest rate-linked.

A5.10 Metadata for debt securities statistics should also include information relating to valuation and accounting rules, including:

- Valuation: nominal value or market value
- Recording basis: accrual basis
- Grossing/netting: gross or net recording of transactions

- Measure: position or flows (transactions i.e., gross issues or redemptions; revaluations; other changes in volume)
- Accounting system: quadruple-entry book-keeping.

A5.11 Metadata for debt securities statistics should also include information relating to the features of the statistics that are common to other groups of series, including, among others:

- Title
- Unit of measure
- Frequency
- Unit multiplier
- Decimals
- Seasonal adjustment
- Collection reference period
- Start date
- Coverage
- Breaks
- Data source
- Methodology
- Timeliness
- Revision procedure
- Contact details.

Equity securities

A5.12. Metadata for equity securities statistics should include information relating to the classifications in the detailed tables in Chapter 9, including:

- Issuer sector: all sectors, nonfinancial corporations, financial corporations, general government, or nonresidents
- Trading currency: domestic currency or foreign currencies
- Country of incorporation: all markets, domestic markets, or international markets
- Country of operation: all markets, domestic markets, or foreign markets
- Types of share: listed or unlisted shares, ordinary or preferred shares, depository receipts.

Table A.5.1 Metadata for Statistics on Debt Securities Issues

Statistical metadata items shared by all financial statistics	
Issuer sector	General government
Issue currency type	All currencies
Issue market	All markets
Maturity	All maturities
Term to maturity	Original
Interest rate type	All interest rates
Variable interest rate type	Not applicable
Debt security type	Nonsecuritization debt securities
Valuation	Nominal value
Recording basis	Accrual
Grossing/netting	Gross
Position and flows	Position
Accounting system	Quadruple-entry bookkeeping
General statistical metadata items shared by all types of statistics	
Title	General government, all maturities (original), all markets, all currencies, all interest rates, non-securitization
Unit of measure	U.S. dollar
Frequency	Quarterly
Unit multiplier	Billion
Decimals	One
Seasonal adjustment	Nonseasonally adjusted
Collection reference period	End of period
Start date	1980 Q1
Coverage	Excludes savings bonds and budget agency securities
Breaks	Before 1985 Q3 data include savings bonds and budget agency securities
Data source	Financial Accounts of the United States; Table L.105 Federal Government and Table L.104 State and Local Governments.
Methodology	Financial Accounts Guide. See www.federalreserve.gov/apps/fof/
Timeliness	One month after reference period
Revision procedure	Mainly affecting recent periods when available
Contact name and e-mail	Mr. Debt Security; debt.security@frb.gov
Specific statistical metadata items for debt securities statistics	
<i>Regulatory and supervisory environment</i>	
Main domestic and international regulations governing the operation of debt securities markets	The Securities Act of 1933 and the Securities Exchange Act of 1934
Names of the regulatory organizations responsible for governing debt securities markets	U.S. Securities and Exchange Commission and self-regulatory organizations such as the Financial Industry Regulatory Authority and the Municipal Securities Rulemaking Board

Table A.5.1 Metadata for Statistics on Debt Securities Issues (Continued)

Specific statistical metadata items for debt securities statistics	
<i>Regulatory and supervisory environment</i>	
Listing and numbering requirements of issuers of debt securities	Listing requirements vary by exchange and marketplace; the Committee on Uniform Security Identification Procedures (CUSIP) numbering system is used, although not all debt securities acquire a CUSIP number
Disclosure requirements for issuers of debt securities	Depends on the type of security and how it is traded
Accounting rules for recording the issuance and trade of debt securities	National Book-Entry System
<i>Market arrangements</i>	
Trading arrangements for debt securities	The Depository Trust & Clearing Corporation and the National Book-Entry System
Clearing arrangements for debt securities	National Securities Clearing Corporation and Fixed Income Clearing Corporation
Settlement arrangements for debt securities	National Securities Clearing Corporation and Fixed Income Clearing Corporation

Table A.5.2 Metadata for Statistics on Equity Securities Issues

Issuer company	Applies to individual equity securities
Issuer industry	Financial
Issuer sector	Deposit-taking corporation except central bank
List date	May be presented in brackets (e.g., before 1Q1990, 1Q1990-4Q1999, after 4Q1990)
ISIN	Applies to individual equity securities
Ticker symbol	Applies to individual equity securities
Country of incorporation	Domestic market
Country of operation	Domestic market
Trading currency	Domestic currency
Listing category	Ordinary shares
Authorized capital	Total volume of authorized capital
Issued shares	Total number of issued shares
Market capitalization	Total value of market capitalization
Valuation	Market value
Recording basis	Accrual
Grossing/netting of transactions	Net
Position and flows	Position
Accounting system	Quadruple-entry bookkeeping

A5.13. Metadata for equity securities statistics should also include information relating to valuation and accounting rules, including:

- Valuation: market value, book value, discounted forecast profits
- Recording basis: accrual basis
- Grossing/netting: gross or net recording of transactions
- Measure: position or flows (transactions, i.e., gross issues less redemptions; revaluations; other changes in volume)
- Accounting system: quadruple-entry bookkeeping.

A5.14. Metadata for equity securities statistics should also include information relating to the features of the statistics that are common to other groups of series, including, among others:

- Issuing corporation
- ISIN
- Ticker symbol
- Listing category: ordinary shares, preferred shares, depository receipts
- Industry: sector and subsector
- Trading currency
- Unit of measure
- Market capitalization
- Issued shares
- List date
- Collection reference period
- Coverage
- Breaks.



ANNEX

6

The Coordinated Portfolio Investment Survey and the Coordinated Direct Investment Survey

The Coordinated Portfolio Investment Survey

A6.1 The Coordinated Portfolio Investment Survey (CPIS) is conducted on a semi-annual basis under the auspices of the International Monetary Fund (IMF) Statistics Department (STA). Participation in the survey is voluntary, and 74 economies participated as of end-2013.¹ Annual data are available from 2001.

A6.2 The CPIS provides information on individual economies' holdings of portfolio investment securities (equity and debt securities) valued at market prices, broken down by the economy in which the issuer is resident. Participants use the definitions and classifications set out in the *Balance of Payments and International Investment Position Manual*, Sixth Edition (BPM6), and the second edition of the *Coordinated Portfolio Investment Survey Guide*.

A6.3 Holdings of securities recorded as direct investment are not included in the results of the CPIS.² STA collects details of reserve assets holdings from the economies participating in the CPIS through a companion survey: the survey of Securities Held as Foreign Exchange Reserves (SEFER). In addition, information on the securities holdings of major international organizations is reported to STA in a companion survey: the survey of Securities Held by International Organizations (SSIO). The data on

reserve assets and on holdings by international organizations are disclosed in such a way that individual holders cannot be identified, as this information is confidential.

A6.4 Together, the three surveys (the CPIS, SEFER, and the SSIO) provide a database on cross-border holdings of securities, broken down on the basis of the economy in which the issuer is resident and the type of security.

A6.5 In addition to “core” data on the counterpart economy where the issuer is resident, participants are encouraged to provide supplementary information on the currency in which the underlying instruments are denominated and the sector to which the resident holder belongs. No data are currently reported on the issuer's economic sector. Participants are also encouraged to collect supplementary information on the stock of securities issued by the reporting economy (liabilities), broken down on the basis of the economy in which the nonresident holder resides and the type of security.

A6.6 The core elements of the CPIS allow a time series analysis of results from two perspectives. First, they allow an analysis of reporting economies' holdings of portfolio investment securities, which highlights changes in the geographical distribution of their investment. Second, the CPIS enables time series data on the portfolio investment liabilities of the economies that issued the securities to be derived from creditor information. This time series can be regarded as a lower bound, as not all economies participate in the CPIS (and of those that do, some do not cover all residents' holdings).

A6.7 The overall structure of the CPIS: (1) provides, at an aggregate level, details of both assets and liabilities

¹ The number of participants has increased over the years. Twenty-nine countries participated in the first survey in 1997. For a guide to the CPIS and SEFER surveys, see: cpis.imf.org/docs/misc/CPIS_and_SEFER_Guidance_Note_on_The_Revised_Reporting_Forms.pdf.

² These holdings are covered in the Coordinated Direct Investment Survey (CDIS), also conducted under the auspices of STA. The CDIS is conducted annually, providing data as at year-end. The first CDIS provided data as at end-2009.

(the latter being derived from creditor data), with a breakdown by financial instrument, which is, in turn, broken down by holding and issuing economy; and (2) provides a breakdown of financial instruments on the basis of the currency of denomination and/or a breakdown of the holding sector on the basis of the issuing economy.

A6.8 In line with the recommendations made in the October 2009 report entitled “The Financial Crisis and Information Gaps,” the IMF has increased the frequency and timeliness of CPIS data, making the data collections at least semi-annual (instead of annual) and reducing the dissemination lag to less than nine months. The IMF is also encouraging the reporting of data on both the institutional sector of the foreign debtor and short/negative positions.

The Coordinated Direct Investment Survey

A6.9 The Coordinated Direct Investment Survey (CDIS) is a global data collection initiative led by the IMF. The purpose of the CDIS is to improve the availability and quality of data on direct investment both overall and by immediate counterpart economy. Consequently, the CDIS supports the objective of developing “from-whom-to-whom” cross-border data, complementing the CPIS and the Bank for International Settlements (BIS) international banking statistics, and contributing to a better understanding of financial interconnectedness.

A6.10 The CDIS is conducted on an annual basis and the results start with data for end-2009.³ Preliminary data are requested nine months after the end of the reference period and released in December. Revised and more comprehensive data are then released in the middle of the following year (i.e., with a total lag of 18 months).

A6.11 The survey’s concepts, coverage, valuation methods, and classification criteria are all consistent with the *BPM6* and the fourth edition of the Organisation for Economic Co-operation and Development (OECD) *Benchmark Definition of Foreign Direct Investment*. Accordingly, foreign direct investment

(FDI) arises when a unit resident in one economy (the direct investor) makes an investment that gives it a significant degree of influence over the management of an enterprise resident in another economy (the direct investment enterprise, or DIENT). This concept is operationalized where a direct investor owns equity (usually ordinary shares) that entitles it to 10 percent or more of the voting power in the DIENT. Once that threshold has been reached, the entities involved are said to be in a “direct investment relationship,” and the equity and debt positions between the direct investor and the DIENT, and between all enterprises that are in a direct investment relationship with that investor (with the exception of debt positions between selected financial intermediaries), are included in direct investment. This includes entities that have a common direct investor, but do not hold 10 percent or more of each other’s equity. These entities are known as “fellow enterprises.”

A6.12 The CDIS collects comprehensive and harmonized data on direct investment positions for each economy at year-end based on the residence of the immediate counterpart to a direct investment position, with equity reported separately from debt investment. For inward direct investment, participating countries compile the value of outstanding year-end positions, broken down by immediate (first) counterpart economy (i.e., the economy of the direct investor), for both equity and debt instruments. For outward direct investment, participating countries provide information on the value of outstanding year-end positions, broken down by immediate (first) counterpart economy (i.e., the economy of the DIENT), for both equity and debt instruments. For inward and outward investment, gross debt liabilities and gross debt assets should be identified separately. However, it is recognized that, owing to the need to preserve data confidentiality, some economies may be able to provide data only on total debt positions (which net out claims and liabilities). Further breakdowns separating positions between fellow enterprises from positions between direct investors and the DIENT and showing the positions of resident financial intermediaries separately from other direct investment positions are encouraged. Countries provide metadata as part of their overall reporting to the IMF.

³ For a guide to the CDIS, as well as data and metadata, see: www.imf.org/external/np/sta/cdis/index.htm.

Table A.6.1 Main Structure of the Coordinated Portfolio Investment Survey

Breakdown by (i) currency of denomination or (ii) country of residence of holder and issuer	Equities	Debt securities	Of which:		Total
			Long-term debt securities	Short-term debt securities	

Investment in (bilateral data)	Holding sector									
	Total assets	Monetary authorities	Banks	Other financial institutions	Of which:				Of which:	
					Insurance corporations	Non-MMF investment funds	Other	General government	Nonfinancial sector	Nonfinancial corporations

Note: In this sectoral breakdown, the CPIIS in its current format does not use the term "non-MMF investment funds," but instead the term "mutual funds" is used.

Table A.6.2 Main Structure of the Coordinated Direct Investment Survey (Inward)

Country of residence of foreign direct investor or fellow enterprise	Total inward direct investment	Debt instruments						Of which: Total inward direct investment with fellow enterprises abroad	
		Equity (Inward-Net)		Net debt		Gross debt instruments		Equity plus debt with fellow enterprises abroad	Total equity and debt instrument assets
		Inward-Net	All other resident enterprises (liabilities minus assets)	Resident financial intermediaries (liabilities minus assets)	Net debt	Total debt instrument liabilities	Total debt instrument assets		
								Net-Inward	Total equity and debt instrument liabilities

A6.13 The CDIS data release shows mirror data, that is, data on inward FDI positions reported by an economy are shown alongside data on outward FDI positions reported by each counterpart economy. Similarly, data on outward FDI positions reported by an economy are shown alongside data on inward FDI positions reported by each counterpart economy. This means that the data reported can easily be compared and inconsistencies identified.

A6.14 In terms of equity, the CDIS covers all of the financial instruments set out in Chapter 3, such as shares (both listed and unlisted), stocks, participation certificates, and depository receipts, as well as equity that is not in the form of securities. The values on the books of the DIENT should be used for both inward and outward direct investment.



ANNEX

7

The 2008 SNA and the Corporate Group Approach

The 2008 SNA

A7.1 The *System of National Accounts 2008* (2008 SNA) defines institutional units on the basis of their place of residence and principal economic activity, with institutional units aggregated in sectors and subsectors. The aggregated data are not consolidated. However, consolidated presentations are occasionally applied for specific sectors or subsectors (e.g., general government or money-issuing corporations) for analytical or policy purposes.

A7.2 The first column of Figure A7.1 illustrates the approach followed by the 2008 SNA.

The Corporate Group Approach

A7.3 Instead of classifying institutional units in sectors, a second approach—also described in the 2008 SNA, but not recommended for national accounts, where strict geographical and sectoral boundaries must be observed—is to arrange institutional units in corporate groups on the basis of ownership and control (i.e., rather than grouping them together on the basis of their principal functions, behavior, and objectives).¹

A7.4 The concept of the institutional unit is also the starting point for explaining the corporate group approach. On the basis of the concept of control, controlling and controlled units are aggregated. These are

then consolidated by eliminating intra-group positions and flows, resulting in the establishment of corporate groups.

A7.5 The controlling and controlled units forming a corporate group usually belong (in terms of the 2008 SNA) to different economies and different sectors/subsectors.² It is therefore impossible to reconcile aggregated data compiled on the basis of the 2008 SNA with the data underlying the corporate group approach. One option, however, is to divide a corporate group into various subgroups comprising units that reside in different places and belong to different resident sectors.

A7.6 Other modifications stem from the application of different consolidation concepts based on the international financial reporting standards (IFRSs) and supervisory principles.³

A7.7 Corporate groups may be large where a parent corporation controls several subsidiaries and some of those control subsidiaries of their own. However, each individual corporation in such a group remains a separate institutional unit. Even wholly owned subsidiaries are separate legal entities required by law and tax regulations to produce full sets of accounts (including balance sheets).

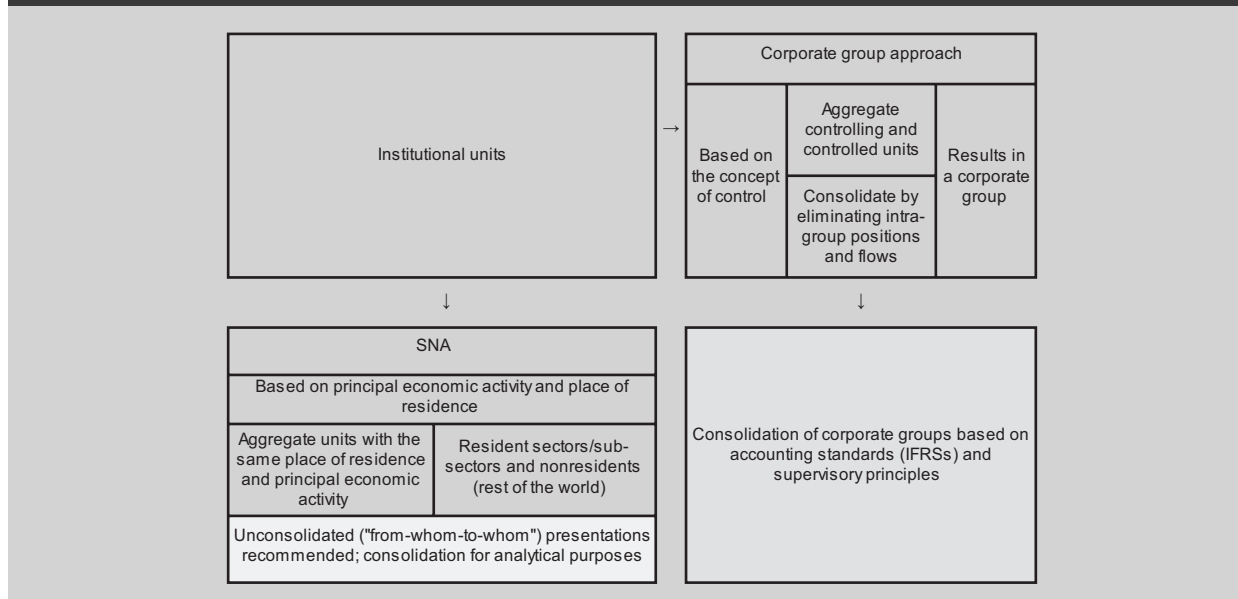
A7.8 For financial stability purposes, it is necessary to have information at the level of corporate groups (particularly for financial groups), so data used for this purpose are usually consolidated at group level.

¹Corporate groups may be financial or nonfinancial. Financial corporate groups comprise mainly financial corporations, but also some nonfinancial corporations, and include both resident and nonresident units. Nonfinancial corporate groups consist predominantly of nonfinancial corporations (2008 SNA, paragraphs 4.51 et. seq.). Large and complex corporate groups are also known as “multinational enterprises” (MNE)—operating in a number of different countries in order to maximize production efficiency and minimize their global tax burden.

²For supervisory purposes, corporate groups may potentially be consolidated only at domestic level (i.e., only domestic subsidiaries are consolidated).

³Discussions are ongoing on this issue as part of the Group of Twenty (G20) data gaps initiative (see the report entitled “The Financial Crisis and Information Gaps,” October 2009).

Figure A.7.1 The 2008 SNA and the Corporate Group Approach



A7.9 When assessing risks and their potential spread across institutions and markets, it is essential to know which unit is bearing the risk in question, regardless of where the relevant assets are held within the group. Where an institution or a whole group fails, it is also important to be able to identify which other groups are exposed to that group (whether directly on-balance sheet or indirectly through contingencies such as guarantees) and are therefore liable to incur losses.⁴

A7.10 It may be that publicly available information is provided only for the corporate group as a whole, with relationships between the constituent corporations in the various countries having been consolidated. In this case, national accountants would need to consult other sources in order to obtain the necessary unconsolidated data.

A7.11 Statistical data used for supervisory and financial stability purposes focus on the activities of the supervised institution as a whole. For financial groups, these data are, accordingly, consolidated across national boundaries in order to include the activities of foreign bank branches. The data may also be consolidated across sectoral boundaries in order to include the activities of financial subsidiaries that

are not banks (or money-issuing corporations). The content of this information is also somewhat different. Although supervisors use the sectoral distinctions and the detailed financial instruments reported for statistical purposes, they are primarily interested in measuring risks (such as counterparty, credit, and market risks).

Corporate Groups and Ownership Structures

A7.12 Groups of financial or nonfinancial corporations or conglomerates (corporate groups) can be large where a parent corporation controls several subsidiaries, some of which control subsidiaries of their own, and so on. The shareholdings of a corporate group are presented in a consolidated form, and consolidated at group level.

A7.13 The debt securities holdings of a corporate group are presented in a consolidated form, at the group level. For financial stability purposes, it may be useful to have information on debt securities holdings consolidated at the level of groups of corporations as a whole (2008 SNA, paragraph 4.51), with a breakdown by issuer (e.g., on a sector and residence or ultimate risk basis), currency, maturity, and type of interest rate.

A7.14 Ownership structures concern the type and composition of shareholders in a given corporation.

⁴The Bank for International Settlements (BIS) follows this approach for its consolidated international banking statistics.

Ownership structures are determined using observable measures of ownership concentration or the extent of direct/indirect ownership.

A7.15 Ownership structures for corporate groups can involve pyramid, ring, and web structures, as well as cross-shareholdings.

A7.16 One example of a type of legally recognized corporate group with a complex structure is the German “Konzerne.” Similarly, “keiretsu” and “chaebol” are types of corporate group in Japan and South Korea, characterized by complex interlocking business relationships and shareholdings. Cross-shareholding arrangements are an essential feature of keiretsu and chaebol groups. The way in which corporations engage with shareholders and other stakeholders can vary substantially, depending on the ownership structure in place.

Family ownership

A7.17 In many economies, family interests dominate ownership structures. It is sometimes suggested that corporations controlled by family interests are subject to better oversight than corporations controlled by institutional investors.

Institutional investors

A7.18 Markets have become increasingly institutionalized: investors are often institutions investing the pooled funds of their intended beneficiaries. These institutional investors include insurance corporations, pension funds, and investment funds (as well as deposit-taking corporations). This kind of investment is described as “institutional investment,” even though the vast majority of the funds are invested for the benefit of individuals.

A7.19 The largest pools of investment funds are designed to maximize the benefits of diversified financial assets by investing sufficient amounts in a very large number of different corporations. The idea is that this strategy will largely eliminate financial and other risks at the level of individual firms. One consequence of this approach is that these investors have relatively little interest in the governance of individual corporations.

Corporate Shareholder Networks

A7.20 The analysis of corporate shareholder networks is an important task in corporate governance.

In all economies, cross-corporation and cross-border shareholding relationships exist, forming complex networks and dependencies linking corporations at national and international level.

A7.21 These networks of shareholders give rise, in turn, to complex investment and control structures linking the entities concerned. Control enhancing mechanisms (CEMs) are fairly common for listed corporations. For instance, nearly half of all European Union (EU) corporations have one or more CEMs, the main ones being pyramid structures and cross-ownership arrangements.

A7.22 Pyramid structures resemble a tree, with the shareholder at the top of the pyramid usually having control. Cross-ownership structures comprise horizontal links established by means of cross-holdings of shares, reinforcing and entrenching the power of central shareholders.

A7.23 The analysis of corporate shareholder networks involves various tasks:

- Determining the degree of ownership concentration by identifying the largest shareholders (typically the controlling shareholders), as well as pyramid and cross-ownership structures.
- Exploring the corporate control system and identifying the controlling shareholders.
- Identifying the ultimate controlling shareholders.

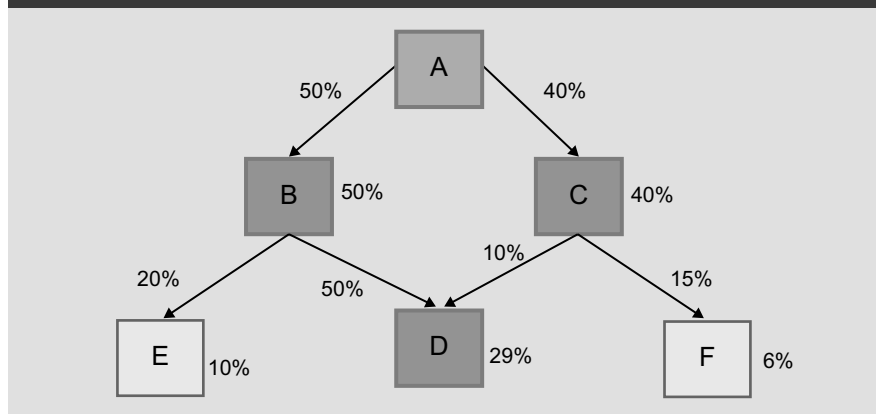
Measures of Shareholder Structures

A7.24 In order to ascertain who are a corporation’s shareholders and how many shares they own, a corporation’s direct and indirect shareholdings need to be examined.

A7.25 Corporation networks are usually displayed as organigrams or ownership matrices. Corporations are presented as dots or squares, and shareholdings are shown as arrows. Colors can be used to distinguish between financial and nonfinancial corporations.

A7.26 Figure A7.2 shows corporation A’s ownership and control vis-à-vis corporations B, C, and D in a pyramid structure. In this example, corporation A owns 50 percent of corporation B and 40 percent of corporation C, but only (indirectly) 29 percent of corporation D. It controls this corporation through its control of corporation B. Corporation A is the ultimate shareholder, as it is not owned by any other

Figure A.7.2 Indirect Control, Direct Control, and Indirect, Direct and Ultimate Ownership by Shareholders in a Pyramid Structure



Note: Squares represent corporations and arrows represent shareholdings (i.e., ownership). Numbers next to arrows indicate direct share ownership as a percentage of total shares. Numbers next to squares E, D, and F indicate indirect ownership as a percentage of total shares.

shareholder. Corporations B, C, and D are not under the influence of other dominating shareholders.

The Euro Groups Register

A7.27 The Euro Groups Register (EGR) is a statistical business register detailing all multinational corporate groups having at least one enterprise in the territory of the EU (including any members of the European Free Trade Association that wish to participate). It contains information on, inter alia, the legal entities that make up those groups (as well as their respective countries of residence) and provides statistics on global business activities, such as foreign direct investment (FDI).

A7.28 In order to support the EGR project, statisticians in the EU are devoting considerable effort to analyzing the legal, operational, and accounting structure of corporate groups at the national and international level.

A7.29 Globalization and structural changes in world production have had a considerable effect on statistics, in particular data on international transactions and FDI. The EGR is intended to act as a single point of reference and the primary tool for the improvement of these statistics. It facilitates analysis of the degree of international

integration of economies and provides information on control relationships between enterprises

The Nationality Approach

A7.30 Nationality refers to the ultimate obligor, as opposed to the immediate borrower on a residence basis and is linked to the consolidation of assets and liabilities for related entities (corporate group approach).

A7.31 Information on a nationality basis is useful to analyze potential support that might be available from the parent company and to understand links between borrowers in different countries and sectors. For example, the parent bank may guarantee the debt of a Cayman Islands subsidiary of a Brazilian bank.

A7.32 Consistent with the approach taken in international banking statistics, the BIS bases the nationality of an issuer on the residence of its controlling parent, regardless of any intermediate owners. The classification of international issues by nationality, instead of residence, results in a reallocation of issuance from financial centers to major economies (i.e., where owners of issuers resident in financial centers reside).

Valuation of Unlisted Shares

A8.1 If financial instruments are not traded in a market or are traded only infrequently, a value equivalent to the market value should be estimated instead. This value is also referred to as a “fair value” and is defined as follows: “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” (*BPM6*, paragraph 3.88).

Valuation Methods as Recommended in International Statistical Standards

A8.2 For unlisted shares (i.e., equity securities not listed on a stock exchange), three different valuation methods are proposed, based on, respectively:¹ (1) recent transactions; (2) accounting data for the corporation; (3) the value of a comparable corporation or a group of comparable corporations.

A8.3 The *2008 SNA* and the *BPM6* establish six different methods for the valuation of unlisted shares. These methods are based on:

- Recent transaction prices (type 1 in the preceding list)
- Net asset values, based on accounting data (type 2)
- Present values or price-to-earnings (P/E) ratios, by discounting forecasted future profits (types 2 and 3)
- Market capitalization or price-to-book value (P/B) ratios (types 2 and 3)
- Own funds at book value (OFBV) (type 2)
- Apportioning of global values (type 3).

A8.4 Essentially, three different valuation methods are applied in practice. Unlisted shares should be estimated with reference to:

- The value of listed shares (where appropriate)
- The value of own funds
- Discounted forecasted profits, applying an appropriate market P/E ratio to the smoothed recent earnings of the institutional unit.

A8.5 However, these estimates should take account of the differences between listed and unlisted shares (notably as regards their liquidity and control premiums) and the corporation’s area of activity.

Implementation of Valuation Methods

A8.6 No single valuation method is prescribed by the international statistical standards. Flexibility is encouraged in the choice of method, and the methods are not ranked. The precise choice of method is left to compilers and is dependent on the availability of data and market conditions in each economy. However, some methods (such as P/E and P/B ratios) are commonly used by valuation practitioners, whereas the OFBV method has been developed by statisticians in

¹ Various studies have focused on the different methods for the valuation of unlisted shares. A Study Group on Shares and Other Equity was set up by the European Monetary Institute in 1997 to consider the issue of valuing unquoted shares. It carried out test exercises aimed at comparing six valuation methods for unquoted shares, looking at two sectors across three countries. The main conclusion of its final report in 1998 was that there was no clear recommendation that could be implemented easily. To follow up on this work, a Eurostat Working Group on Unquoted Shares was established in 2002, with an Organisation for Economic Co-operation and Development (OECD) task force being set up some years later. In 2012, the European System of Central Banks (ESCB) Working Group on External Statistics set up the Task Force on the Valuation of FDI Positions to study, in particular, the impact on the net international investment position of the methods used to value unlisted equity. Damgaard and Elkjaer (2014) provide an in-depth analysis of the impact of using different valuation methods and estimation techniques.

an attempt to achieve a harmonized definition of book value across countries and accounting standards.

A8.7 To apply the P/B method, the following accounting data (balance sheet positions) are required. The book value of equity is calculated as share capital (i.e., common and preferred shares) plus the contributed surplus, plus retained earnings. Stock exchange data are then matched to the book value data. P/B ratios are calculated by dividing the market value of an enterprise by its book value. The ratio of the share price to the book value may vary depending on the economic sector. It is therefore preferable to calculate the current price of unlisted shares for each economic sector. There may also be other differences between listed and unlisted corporations, which may have an impact on the estimation method.

A8.8 The OFBV method gives unlisted shares the accounting value reflected in the financial reports (annual accounts) of the corporation in question, that is, the value of unlisted shares is equal to the book value. Book value is defined as paid-up capital plus all types of reserves identified as equity in the enterprise's balance sheet, plus cumulated reinvested earnings, plus holding gains or losses included in own funds in the accounts (2008 SNA, paragraph 13.71 (e)). In some circumstances, a strict application of this method can lead to an inconsistent valuation of cross-border assets and liabilities of one institutional unit (and consequently to distortions in a country's international investment position, or IIP). For example, the net position of a corporation in the middle of a foreign direct investment (FDI) chain may be distorted when substantial amounts of goodwill are recorded on its balance sheet (determining FDI equity liabilities), but are not reflected in the OFBV of the direct investment corporation (determining FDI equity assets) since, according to accounting rules, goodwill is only recorded on the balance sheet of the acquiring corporation.

A8.9 The P/E method requires the availability of accounting data on the smoothed recent earnings of both listed and unlisted corporations, as well as the P/E ratio of listed corporations. This ratio is ultimately applied to the forecasted future profits of unlisted corporations. As with the P/B method, this ratio should be calculated for each sector in turn.

Liquidity, Control, and Negative Equity Values²

A8.10 The valuation of unlisted shares may need to be modified further in order to take account of issues relating to liquidity, control, and negative equity values. These factors may have a significant impact on the valuation of unlisted shares.

- Unlisted shares typically have lower levels of liquidity than listed shares. This tends to have a negative effect on their value and should be taken into account if the impact is significant.
- Unlisted corporations usually have few owners (often just one). A control premium is frequently paid when an investor obtains a controlling stake in a corporation. Since this control premium will usually be offered to all shareholders, all shares in a given corporation should be valued at the same price.
- These valuation methods may generate negative positions, which are not consistent with the limited liability aspect of equity. For instance, the P/E method often generates negative estimates of market value, as earnings are volatile and frequently negative. The *BPM6* allows the inclusion of negative FDI equity positions in the IIP, but practices may differ across individual countries. One alternative would be to establish a threshold or limit for the valuation of unlisted shares, whereby the value obtained by means of the various methods would never be lower than the share capital.

²This section follows mainly Damgaard and Elkjaer (2014).



Glossary

Acquisition: The purchase of newly issued securities from an issuer or the purchase of existing securities from the previous holder on the secondary market. Acquisitions are considered to have occurred when claims and obligations arise, usually in exchange for currency or transferable deposits. Net acquisitions are gross acquisitions minus disposals.

Aggregation: The summing of gross positions or flows. Data for a group of institutional units are equal to the sum of the gross positions or flows for all units in the group (*BPM6*, paragraph 3.110).

Allotment certificates: These are issued by a corporation to represent its shares and are traded on the stock exchange. Allotment certificates expire and are converted into shares on a one-to-one basis without any additional payment when the underlying issue is registered.

Asset-backed commercial paper (ABCP): Commercial paper, created through securitization, whose redemption value is dependent on a homogenous pool of assets, either purchased in the secondary market or from the balance sheet of an original asset owner, such as mortgages, residential mortgage-backed securities (RMBS), motor vehicle and equipment loans and leases, etc. (see also asset-backed security and commercial paper).

Asset-backed security (ABS): A bond, created through securitization, whose coupon payments and principal repayments are dependent on a homogeneous pool of assets, either purchased in the secondary market or from the balance sheet of an original asset owner, such as mortgages, credit card loans, motor vehicle loans, etc.

Asset price-linked security: A debt security linked to nonfinancial asset prices and indices, such as the gold price or a commodities price index; to

financial asset prices and indices, such as a specific share price or share price index; or to other asset prices, such as property prices.

Bankers' acceptance: A negotiable order to pay a specified amount of money on a future date, accepted and guaranteed by a bank and drawn on a deposit at a bank.

Bonds and notes: Debt securities with an original maturity of more than one year that are negotiable and usually traded in organized and other financial markets; they usually give the holder the unconditional right to fixed income or contractually determined variable money income.

Certificate of deposit: Usually a negotiable certificate issued by a bank acknowledging a deposit in that bank for a specified period of time at a specified interest rate.

Closed-ended investment fund shares or units: These are limited in number and sometimes have a specified maturity period (typically five to seven years). New shares or units are rarely issued once the fund has been launched, and shares or units are not normally redeemable until the fund is liquidated.

Collateralized debt obligation (CDO): A bond, created through securitization, whose coupon payments and principal repayments are dependent on a diversified pool of loan and bond instruments, either purchased in the secondary market or from the balance sheet of an original asset owner; similar instruments include collateralized mortgage obligations (CMO), collateralized loan obligations (CLO), and collateralized bond obligations (CBO) (*External Debt Statistics Guide*, Appendix I).

Commercial paper: A discounted and unsecured debt security issued by a corporation whose name

appears on the front of the security and who promises to pay to the security holder a certain amount on a stated maturity date (see also promissory note and asset-backed commercial paper) (*External Debt Statistics Guide*, Appendix I).

Consolidation: The elimination of positions or flows between institutional units that are grouped together for statistical purposes (2008 SNA, paragraph 2.68). Institutional units can be consolidated at subsector, sector, or national level, or at the level of corporate groups.

Convertible bond: A fixed interest rate bond that the investor has the option of converting into the equity of the borrower or its parent (*External Debt Statistics Guide*, Appendix I).

Coordinated Portfolio Investment Survey (CPIS): Conducted on a semi-annual basis under the auspices of the IMF's Statistics Department (STA). Participation in the CPIS is voluntary and 74 economies participated as of end-2013. Annual data are available from 2001. The CPIS provides information on individual economies' holdings of portfolio investment securities (equity securities and debt securities) at market value, broken down by the country of residence of the issuer of the securities. Participants use the definitions and classification criteria set out in the *Balance of Payments and International Investment Position Manual, Sixth Edition (BPM6)* and the second edition (2002) of the *Coordinated Portfolio Investment Survey Guide*.

Coupon payments: Payments covering part or all of the interest accrual during a period and payments that reduce the initial principal (*BPM6*, paragraph 11.49).

Covered bond: A debt security, created through securitization and issued by the original asset owner, which is backed by assets remaining on the balance sheet of the original asset owner, but identified as belonging to a cover pool.

Cover pool: A package of assets, such as mortgages and credit card loans, which is used to back debt securities issuance.

Credit default swap (CDS): A financial derivative whose primary purpose is to trade credit default risk (2008 SNA, paragraph 11.123).

Credit-linked note (CLN): A debt security, created through securitization, with an embedded credit derivative used to hedge the credit risk of reference assets on the balance sheet of the original asset owner (*External Debt Statistics Guide*, Appendix I).

Debenture: An unsecured or uncollateralized debt security that is backed only by the creditworthiness of the issuer.

Debtor and creditor approach to recording accrued interest: Under the *debtor* approach, when debt securities are issued at a fixed rate, the rate of interest payable, and accruing, is fixed at the time the debt security is issued. Under the *creditor* approach, the prevailing market rate during the period is used to determine the interest paid on a debt security.

Debtor/creditor principle: See issuer/holder principle.

Debt security: A negotiable financial instrument serving as evidence of a debt (2008 SNA, paragraph 11.64).

Debt securities holdings: Ownership of debt securities (financial assets) by an institutional unit.

Deep-discount bond: A bond that has small or no coupon payments and is issued at a considerable discount to its face value (*External Debt Statistics Guide*, Appendix I).

Delisting: The removal of a listed equity security from the exchange on which it is traded. Delisting occurs when the corporation issuing the security no longer complies with the exchange's listing requirements.

Depository receipt: A financial instrument that allows a nonresident to introduce securities into a market in a form more readily acceptable to the investors in that market. A deposit-taking corporation will purchase the underlying security and then issue receipts in a currency more acceptable to the investor (*External Debt Statistics Guide*, Appendix I).

Development capital certificate (CCD) (also "certificados de capital de desarrollo"): Issued by trusts to channel investment resources to specific sectors and activities. This is similar to financial instruments issued by special-purpose acquisition companies (SPAC) in the United States, income trusts in Canada, and infrastructure funds in Australia.

- Dirty and clean price:** The market price of a debt security is its *dirty price*, which includes accrued interest. In order to separate out the effect of the coupon payments, the accrued interest between coupon dates is subtracted from the *dirty price* to arrive at the *clean price*.
- Disposal:** The sale of securities to the issuer on maturity or on redemption at an earlier date, or the sale of securities to a new holder on the secondary market, usually in exchange for currency or transferable deposits. Disposal is considered to have occurred when an obligation ceases to exist, owing to one of these actions.
- Domestic currency:** The currency that is legal tender in an economy and is issued by the monetary authority for that economy—this could be the currency of an individual economy or, in a currency union, that of the common currency area to which the economy belongs (*BPM6*, paragraph 3.95).
- Domestic-currency-denominated securities:** Securities issued and settled in domestic currency.
- Domestic market:** Debt securities issued by a resident of the same economy in which the security is issued (“residence of issuer” residence of issuer approach) or debt securities issued by both a nonresident and a resident of the economy in which the security is issued (“location of issue” approach).
- Dual-currency bond:** A bond for which the interest or principal payments (or both) differ from the currency in which it was issued.
- Duration:** The weighted average term to maturity of a debt instrument. The time period until the receipt/payment of each cash flow, such as six months, is weighted by the *present value* of that cash flow, as a proportion of the present value of total cash flows over the life of the instrument. Present value can be calculated using the yield-to-maturity or another *interest* rate. The more the cash flows are concentrated toward the early part of a debt instrument’s life, the shorter the duration relative to the time to maturity (*External Debt Statistics Guide*, Appendix 3).
- Equity:** All instruments and records acknowledging claims on the residual value of a corporation or quasi-corporation after the claims of all creditors have been met.
- Equity securities:** Negotiable financial instruments, comprising listed shares and unlisted shares.
- Equity warrant bond:** A debt security that incorporates a warrant, which gives the holder the option to purchase equity in the issuer, its parent company, or another company during a predetermined period or on one particular date at a fixed contract price.
- Exchangeable bond:** Similar to a convertible bond, but the holder has instead the option to exchange the debt security for an equity security in a corporation other than the issuer or its parent.
- Face value:** The amount of principal to be repaid (*2008 SNA*, paragraph 3.154 (d)); also known as “par value,” or simply “par.”
- Financial corporations sector:** Sector consisting of all resident corporations that are engaged principally in the provision of financial services (including insurance and pension funding services) to other institutional units (*2008 SNA*, paragraph 4.98).
- Financial derivatives:** Negotiable financial instruments linked to specific financial or nonfinancial assets or indices, which allow financial risks to be traded in financial markets in their own right. They are not classified as securities.
- Fixed interest rate debt security:** A debt security whose coupon payments are set for the life of the security or for a certain number of years (see also variable interest rate debt security).
- Flow:** Economic actions and the effects of events within a given accounting period (*BPM6*, paragraph 3.2).
- Foreign currencies:** All currencies other than the domestic currency (*BPM6*, paragraph 3.95).
- Foreign-currency-denominated securities:** Securities issued and settled in foreign currencies.
- Foreign direct investor:** An entity or group of related entities that is able to exercise control or a significant degree of influence over another entity that is a resident of a different economy (*BPM6*, paragraph 6.11).
- “From-whom-to-whom” framework:** The presentation of debt securities holdings broken down by debtor/creditor. This is identical to the flow-of-funds presentation (*2008 SNA*, Chapter 27).

General government sector: Sector consisting of legal entities established by political processes that exercise legislative, judicial, or executive authority over other institutional units within a given area (2008 SNA, paragraph 4.117).

Global aggregates: Debt and equity securities aggregates for the world as a whole and for different areas and countries.

Group of corporations: A parent corporation that controls several subsidiaries (some of which may control subsidiaries of their own, and so on).

Household sector: Sector consisting of groups of persons who share the same accommodation, pool some or all of their income and wealth, and consume certain types of goods and services (mainly housing and food) collectively. This also covers unincorporated enterprises (2008 SNA, paragraph 4.149).

Inflation-linked security: A debt security whose principal amount or coupon (or both) is indexed to inflation, for example to a consumer price index; as the principal amount increases with inflation, the interest rate that is applied to this increased amount raises coupon payments over time.

Institutional investors: Major holders of debt and equity securities. Institutional investors include investment funds (both money market funds (MMFs) and non-MMFs), insurance corporations, and pension funds (Organisation for Economic Co-operation and Development (OECD), Institutional investors' assets database).

Interest payments: Periodic payments of the interest costs that the borrower incurs and that primarily take the form of coupons.

Interest-rate-linked security: A debt security linked to a specific interest rate or interest rate index.

International markets: All markets other than the domestic market (applicable only to the "location of issuer" approach).

Investment funds: Collective investment schemes that raise funds by issuing shares or units to the public. The proceeds are invested in financial and nonfinancial assets (usually real estate).

Investment fund shares or units: These represent a claim on part of the value of an established investment fund.

Issuer/holder (debtor/creditor) principle: This captures a transaction between two institutional units in the accounts of the two transactors and allows the change in holder (creditor) to be recorded in the financial account of the issuer (debtor). Alternatively, in the case, for example, of the assumption of equity or debt, it allows the change in issuer (debtor) to be recorded in the financial account of the holder (creditor).

Listing: The entry of a corporation in the share register of a given marketplace or stock exchange, allowing its shares to be traded.

Location of issue: The presentation of statistics based on a geographic breakdown of debt securities markets.

Long-term maturity: Maturity of more than one year, or no stated maturity (BPM6, paragraph 5.103 (b)).

Market value: The price at which debt securities are acquired or disposed of in transactions between willing parties, excluding commissions, fees, and taxes (2008 SNA, paragraph 3.122), but including accrued interest.

Money market funds (MMFs): Investment funds that invest only or primarily in short-term money market securities, such as treasury bills, certificates of deposit, and commercial paper.

Money market fund shares or units: These represent a claim on part of the value of an established money market fund.

Negotiable: This refers to the fact that legal ownership can be readily transferred from one party to another by means of delivery or endorsement (BPM6, paragraph 5.15).

Nominal value: The nominal value of a *debt instrument* is the amount that at any moment in time the *debtor* owes to the *creditor*; this value is typically established by reference to the terms of a contract between the debtor and creditor. The nominal value of a debt instrument reflects the value of the debt at creation, and any subsequent economic flows, such as transactions (e.g., repayment of *principal*), valuation changes (independent of changes in its market price), and other changes. Conceptually, the nominal value of a debt instrument can be calculated by discounting future *interest* and principal payments

at the existing contractual interest rate(s) on the instrument; the latter may be a fixed or a variable rate. (*External Debt Statistics Guide: Guide for Compilers and Users 2013*, Appendix 3).

Nominee account: A legal device for holding assets, which may be used for reasons of confidentiality or convenience. The assets held in nominee accounts should be attributed to the beneficial owner, not the nominee.

Nonfinancial corporations sector: Sector consisting of corporations whose principal activity is the production of market goods or nonfinancial services (*2008 SNA*, paragraph 4.94).

Non-participating preferred share: A type of preferred share in which the payment of a “dividend” (usually at a fixed interest rate) is calculated according to a predetermined formula and not determined by the earnings of the issuer.

Nonprofit institutions serving households (NPISHs): Legal entities engaged principally in the provision of nonmarket services for households or the community in general, whose main resources are voluntary contributions (*2008 SNA*, paragraph 2.17 (e)).

Note issuance facility (NIF): A note issued under a NIF is a short-term debt security issued under a legally binding medium-term facility—a form of revolving credit.

Open-ended investment fund shares or units: These are issued and redeemed on a continuous basis, or at certain predefined (short-term) intervals. The most popular types of open-ended investment fund are exchange-traded funds (ETF) and money market funds. An open-ended investment fund is divided equally into shares or units, which vary in price in direct proportion to variations in the fund’s net asset value (NAV).

Original maturity: The period from the date of issue of a debt security until the final contractually scheduled payment (*BPM6*, paragraph 5.104 (a)).

Original owner: An institutional unit that is an originator or purchases assets from an originator in the secondary market.

Originator: An institutional unit that originates assets as part of its regular business activities.

Other change in the volume of assets: A change in the quantity or physical characteristics of debt or equity securities, or a change in classification.

Other financial corporations: Financial corporations other than the central bank, other money-issuing corporations and securitization corporations.

Other money-issuing corporations: Deposit-taking corporations and money market funds that issue liabilities included in the national definition of broad money.

Ownership structure: The type and composition of shareholders in a corporation. This can be identified using observable measures of ownership concentration or the extent of direct/indirect ownership.

Portfolio investment: Cross-border transactions and positions involving debt or equity securities, other than those included in direct investment or reserve assets (*BPM6*, paragraph 6.54).

Position: The level of assets or liabilities at a particular point in time (*BPM6*, paragraph 3.2).

Principal (original): The amount borrowed and to be repaid excluding interest due or accrued (*MFSCG*, paragraph 2.46).

Principal (outstanding): The provision of economic value by the *creditor*, or the creation of debt liabilities through other means, establishes a principal liability for the debtor, which, until extinguished, may change in value over time. For *debt instruments* alone, for the use of the principal, *interest* can, and usually does, accrue on the principal amount, increasing its value (*External Debt Statistics: Guide for Compilers and Users 2013*, Appendix 3).

Private placement: A debt security that is issued by an issuer directly to a small number of investors and which is typically not rated by credit rating agencies.

Promissory note: An unconditional promise to pay a certain sum on demand on a specified date (see also commercial paper).

Protection buyer: An institutional unit in synthetic securitization that makes payments to a protection seller in exchange for credit risk protection for reference assets.

Protection seller: An institutional unit in synthetic securitization that sells protection against the credit risk on a premium buyer's reference assets.

Public sector: Sector comprising general government and public financial and nonfinancial corporations, including the central bank.

Redemption value (redemption price): The amount to be paid by the issuer to the holder at maturity (*External Debt Statistics: Guide for Compilers and Users 2013*, Appendix 3).

Remaining maturity: The period from the reference date of a debt security until the final contractually scheduled payment; also referred to as residual maturity (*BPM6*, paragraph 5.104 (b)).

Repurchase agreement: An arrangement involving the provision of securities in exchange for cash with a commitment to repurchase the same or similar securities at a fixed price, either on a specified future date or with an "open" maturity (*BPM6*, paragraph 5.52).

Residence: The place of residence of an institutional unit is the economic territory with which it has the strongest connection—that is, its "center of predominant economic interest" (*2008 SNA*, paragraph 4.10).

"Residence of holder" approach: The presentation of statistics based on a breakdown of holders of equity securities by place of residence.

"Residence of issuer" approach: The presentation of statistics based on a breakdown of issuers of equity securities by place of residence.

Revaluation: This reflects changes in the prices of equity securities holdings. It also includes changes in the value of foreign-currency-denominated equity securities holdings, which are due to changes in exchange rates.

Reverse transactions: Arrangements that involve a sale (and a change of legal ownership) of securities with a commitment to repurchase the same or similar securities, either on a specified date or with open maturity, at a pre-agreed price.

Securities lending: Involves the temporary transfer of securities by the lender (the seller of the securities or cash receiver) to the borrower, and may require the securities borrower to provide assets as col-

lateral in the form of cash or securities. Legal title passes on both sides of the transaction so that the borrowed securities and collateral can be sold or on-lent. No transaction in the securities exchanged is recorded.

Securitization: The creation and issuance of debt securities for which coupon or principal payments (or both) are backed by specified financial assets or income streams.

Securitization corporation: A financial corporation that specializes in issuing securitization debt securities (*BPM6*, paragraph 4.77 (a)).

Securitization debt securities: Debt securities created through securitization, such as covered bonds, asset-backed securities (ABS), credit-linked notes (CLN), or collateralized debt obligations (CDO).

Security: A negotiable financial instrument (*BPM6*, paragraph 5.15).

Security-by-security (SBS) database: A micro-level database that stores statistics at the level of individual debt securities.

Separate trading of registered interest and principal of securities (STRIPS): Securities that have been transformed from a principal amount with periodic interest coupons into a series of zero-coupon bonds, whose range of maturities matches the coupon payment dates and the redemption date of the principal amount.

Shares: Negotiable financial instruments representing claims on the residual value of a corporation after the claims of all creditors have been met. These comprise listed and unlisted shares.

Short selling: The practice of selling assets, usually securities, that have been borrowed from a third party, with the intention of buying identical assets back at a later date to return to the lender.

Short-term maturity: A maturity of one year or less or a security payable on demand (*BPM6*, paragraph 5.103 (a)).

Sinking fund provision: A stipulation in the terms of issue of a bond that the borrower retire (set aside) a certain proportion of the debt annually.

Transactor principle: This captures a change in the ownership of a financial asset in the accounts of

the two creditors involved (i.e., the transactors), but not in the account of the debtor. Alternatively, in cases where one institutional unit assumes the liability of another, it captures the change of debtor in the accounts of those two units, but not in that of the creditor.

Treasury bill: A common form of sovereign short-term debt security that many governments issue. It gives the holder the unconditional right to receive stated fixed sums on a specified date, and is issued at a discount to face value that depends on the rate of interest and the time to maturity (*BPM6*, paragraph 5.44).

Variable interest rate debt security: A debt security with a coupon linked with a fixed spread to a reference index, such as an interbank interest rate, the price of a specific commodity, or the price of a specific financial instrument, which usually changes

continuously in response to market conditions (*BPM6*, paragraph 5.110).

Variable rate note (VRN): A debt security that is similar to a variable interest rate debt security, but the spread of which in relation to the reference index varies over time depending on changes in the perceived credit risk of the issuer.

Warrants: Negotiable financial instruments giving the holder the right to buy, subject to specific conditions and for a specified period of time, a certain number of shares or bonds from the issuer of the warrant (usually a corporation). They are classified as financial derivatives.

Zero-coupon bond: A single-payment debt security that has no coupon payments during its life; it is issued at a discount to its face value and the full return is paid at maturity.



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