

HANDBOOK ON SECURITIES STATISTICS

Part 2: Debt Securities Holdings

September 2010



BANK FOR INTERNATIONAL SETTLEMENTS



EUROPEAN CENTRAL BANK

EUROSYSTEM



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Preface

The production of the *Handbook on Securities Statistics* (the *Handbook*) is a joint undertaking by the Bank of International Settlements (BIS), the European Central Bank (ECB) and the International Monetary Fund (IMF), which have a particular interest and expertise in securities statistics and which are the core members of the Working Group on Securities Databases (WGSD).¹ The institutions sponsoring the *Handbook* are responding to calls by different international groups to develop methodological standards for securities statistics. In November 2009 the report by the Financial Stability Board Secretariat and IMF staff to the G-20 finance ministers and central bank governors on *The Financial Crisis and Information Gaps* endorsed the development of the *Handbook* as well as a step-wise implementation of improved statistics on issues and holdings of securities at the national and international level. With respect to the latter, the BIS compilation exercise of debt securities data plays an important role.²

Part 1 of the *Handbook* was published in May 2009. It deals with statistics on debt securities issues. Part 2 of the *Handbook* provides a conceptual framework for the position and flow statistics on debt securities holdings based on the *System of National Accounts, 2008 (2008 SNA)* and the *Balance of Payments and International Investment Position Manual*, sixth edition (*BPM6*). It goes partly beyond these standards by elaborating on additional issues such as debt securities holdings by issuer, currency, maturity, type of interest rate and country. Special attention is also paid to specific operations related to debt securities holdings such as reverse transactions, short-selling, depository receipts, stripped securities and nominee accounts.

As in Part 1 of the *Handbook*, the conceptual framework is complemented with presentation tables showing data at aggregated and detailed levels. This should provide sufficient flexibility in the presentation of data on debt securities holdings, in line with the relative state of development of debt securities markets and investor behaviour.

The following officials in the sponsoring organisations are primarily involved in the activities of the WGSD and have contributed to the preparation of Part 2 of the *Handbook on Securities Statistics*:

BIS Mr. Christian Dembiermont
Mr. Philippe Mesny
Mr. Paul Van den Bergh

IMF Mr. José Cartas
Mr. Alfredo Leone (Chair of the WGSD)
Ms. Armida San Jose

ECB Mr. Werner Bier
Mr. Reimund Mink (Coordinator)

¹The Working Group on Securities Databases was originally established by the IMF in 1999. It was reconvened in 2007 in response to various international initiatives and recommendations to improve information on securities markets. The Working Group is chaired by the IMF.

²See www.bis.org/statistics/securities for more information.

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

Bank of Algeria	Bank of Mexico
Reserve Bank of Australia	Netherlands Bank
Austrian National Bank	Statistics Norway
National Bank of Belgium	Central Bank of Norway
Bulgarian National Bank	Bangko Sentral ng Pilipinas
Bank of Canada	National Bank of Poland
Statistics Canada	Bank of Portugal
Croatian National Bank	Saudi Arabian Monetary Agency
Czech National Bank	Monetary Authority of Singapore
National Bank of Denmark	Bank of Slovenia
Bank of Finland	South African Reserve Bank
Bank of France	Bank of Spain
Deutsche Bundesbank	Swiss National Bank
Bank of Greece	Bank of Thailand
Magyar Nemzeti Bank	Central Bank of the Republic of Turkey
Central Bank of Iceland	Bank of England
Central Bank and Financial Services Authority of Ireland	Board of Governors of the Federal Reserve System
Bank of Italy	
Central Bank of Lebanon	Commonwealth Secretariat
Central Bank of Luxembourg	United Nations Conference on Trade and Development
National Bank of the Republic of Macedonia	
Central Bank of Malaysia	

The feedback provided from experts in these institutions has significantly contributed to the preparation of Part 2 of the *Handbook*. The WGSD envisages continuing to solicit input from users and compilers of securities statistics in the elaboration of additional parts of the *Handbook*.³

The WGSD recommends that the national and international agencies make use of Part 2 of the *Handbook* to seek improvements in statistics on the holdings of debt securities, including in the context of the Coordinated Portfolio Investment Survey of the IMF. The ongoing financial crisis in global financial markets, which has entered a phase involving the issues and holders of sovereign debt, continues to confirm the importance of timely, relevant, coherent and international comparable data on debt securities. The institutions involved will maintain their support for the WGSD in its

³The next part of the *Handbook* is envisaged to cover the issuance and holdings of other types of securities. In the future, guidance on security-by-security databases might be provided as well as metadata structure definitions that would facilitate the compilation and dissemination of securities statistics.

efforts to improve the transparency of global securities markets, including through the further development of the *Handbook* and its implementation.

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Acronyms

ABCP	Asset-backed commercial paper
ABS	Asset-backed security
ADR	American depository receipt
BIS	Bank for International Settlements
<i>BPM5</i>	<i>Balance of Payments Manual</i> , fifth edition
<i>BPM6</i>	<i>Balance of Payments and International Investment Position Manual</i> , sixth edition
CDIS	Coordinated Direct Investment Survey (IMF)
CPIS	Coordinated Portfolio Investment Survey
ECB	European Central Bank
EU	European Union
IMF	International Monetary Fund
ISIN	International Security Identification Number
<i>MFS Guide</i>	<i>Monetary and Financial Statistics: Compilation Guide</i>
MMF	Money market fund
OECD	Organisation for Economic Co-operation and Development
SBS	Security-by-security
SEFER	Survey of securities held as foreign exchange reserves
<i>2008 SNA</i>	<i>System of National Accounts, 2008</i>
SSIO	Survey of securities held by international organisations
STA	IMF's Statistics Department
Strips	Separate trading of registered interest and principal of securities

Section 1 Introduction

Scope of Part 2 of the *Handbook on Securities Statistics*

1.1 Data on debt securities holdings are required for monetary policy and financial stability analysis. For monetary policy purposes, much interest lies in changes in the wealth conditions and asset prices related to the debt securities held by resident sectors, such as households, and by non-residents. Also, information on the debt securities holdings of financial corporations may help to enhance the analysis of “external” corporate finance by counterpart sector. In addition, data broken down by residence and sector on the holders of debt securities issued by general government are required for the analysis of public finances.

1.2 For financial stability purposes, a more detailed breakdown is required, with the holdings of debt securities classified by individual issuer, and also by currency, maturity, type of interest rate, or type of debt security (such as asset-backed securities). 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 sub-sector (money-issuing corporations, insurance corporations, pension funds and (non-MMF) investment funds).

1.3 Security-by-security (SBS) databases can, in conjunction with debt securities holdings statistics, significantly improve the quality of monetary, financial, 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.

1.4 Part 2 of the *Handbook on Securities Statistics* (the *Handbook*) covers the conceptual framework for position and flow statistics on debt securities holdings. This conceptual framework is summarised below using two types of stylised presentation tables with aggregate statistics on debt securities holdings. In the medium term, it is envisaged that the conceptual framework will be extended to cover issues and holdings of other types of securities.

1.5 By extending or modifying the groupings used in international statistical standards, and suggesting new classifications, Part 2 of the *Handbook* enriches information on debt securities holdings. This is done, for instance, by referring separately to holdings of debt securities by money-issuing corporations, institutional investors or securitisation corporations, or to debt securities holdings with breakdowns by type of interest rate. The quality and comparability of debt securities holdings statistics across economies are also important issues in the context of developing financial accounts and balance sheets, since the latter can easily be used to provide national and global aggregates. Such data may also help to understand the potential linkages in the nature and degree of exposure of non-resident holdings to debt securities issued by residents, or of resident holdings to debt securities issued by non-residents.

1.6 Part 2 of the *Handbook* also refers to the IMF Coordinated Portfolio Investment Survey (CPIS), which is conducted on a

voluntary basis (see Annex 1). It provides information, for each contributing country, on cross-border holdings of portfolio investment securities, aggregated by type of security (equity securities 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).

The conceptual framework

1.7 The conceptual framework for the presentation of statistics on debt securities holdings is based on the *System of National Accounts, 2008 (2008 SNA)* and the *Balance of Payments and International Investment Position Manual*, sixth edition (BPM6), but goes partly beyond these standards by elaborating on additional issues. Specifically, Part 2 of the *Handbook* gives guidelines on debt securities holdings statistics by issuer, currency, maturity, type of interest rate and country.

1.8 As debt securities markets differ considerably across countries, existing statistical presentations vary. While it is not always simple to compare the different presentations, it is possible to develop a standard conceptual framework.

1.9 Two tables are presented in Part 2 of the *Handbook*: the stylised presentation tables A and B. Stylised presentation table A (Table 1.1) is based on the “residence of holder” approach, in line with the existing international statistical standards. As a summary table, it groups the resident institutional units that hold debt securities into the main institutional sectors. Depending on the purpose of such a table, institutional sectors may be further broken down into sub-sectors.

1.10 Table 1.1 shows positions, transactions or other flows (revaluations and other changes in the volume of assets) for debt securities held by residents and non-residents. Specifically, it shows the debt securities holdings of resident and non-

resident institutional units. The resident institutional units are grouped into resident sectors (non-financial corporations, financial corporations, general government, and households and non-profit institutions serving households) holding debt securities issued by all issuers, resident and non-resident, without a breakdown by residency or resident sector of issuer⁴ (which is indicated by the fact that the cells of row # 3 from column # 1 to column # 5 of Table 1.1 are shaded grey). In addition, non-residents hold debt securities issued by residents and these holdings are shown in the cell of row # 1 and column # 6 of Table 1.1 (which is also shaded grey).

1.11 Holdings of non-residents of debt securities issued by non-residents are not included (black cell of row # 2 and column # 6 of Table 1.1). These holdings are not relevant from a national economy’s perspective (Part 1 of the *Handbook*, 5.15).

1.12 As in the case of presentation table A, the stylised presentation table B (Table 1.2) shows the holdings of resident institutional units by sector and the holdings of non-residents vis-à-vis resident issuers. However, it reflects the “from-whom-to-whom” approach as it presents the relationships between resident sectors as holders and residents and non-residents as issuers, and between non-residents as holders and residents as issuers of debt securities.

1.13 For a national economy, it shows positions, transactions, revaluations and other changes in the volume of assets for debt securities held by residents grouped into sectors (non-financial corporations, financial corporations, general government, and households and non-profit institutions serving households) and by non-residents

⁴The residency breakdown is included in Table 2.1 because the debt securities issued by residents and held by non-residents need to be identified separately.

Table 1.1

Presentation table A (residence of holder approach)—unconsolidated

Holder Issuer		Residents					Non-residents	All holders		
		Non-financial corporations	Financial corporations	General government	Households and non-profit institutions serving households	All residents				
		1	2	3	4	5	6	7		
Residents	1								Residence of issuer	
Non-residents	2									
All issuers	3									
		Residence of holder								

Table 1.2

Presentation table B (from-whom-to-whom approach)—unconsolidated

Issuer by residency and by resident sector	Holder by residency and by resident sector	Residents				Non-residents	All holders	
		Non-financial corporations	Financial corporations	General government	Households and non-profit institutions serving households			
Residents	Non-financial corporations							Residence of issuer
	Financial corporations							
	General government							
	Households and non-profit institutions serving households ¹⁾							
Non-residents								
All issuers								
		Residence of holder						

¹⁾Households and non-profit institutions serving households may be legally entitled to issue debt securities. In the case of households, debt securities can be issued to finance the purchase of dwellings.

vis-à-vis institutional units as issuers, broken down by residency and by institutional sector (cells of Table 1.2 shaded grey).

1.14 For residents, the presentation of unconsolidated data on debt securities holdings is recommended. This means that intra-sectoral positions, transactions, revaluations and other changes in the volume of assets of debt securities issues and holdings are covered (cells shaded light blue).

1.15 As also indicated in presentation table A, the holdings of non-residents of debt securities issued by non-residents are not covered (black cell). These are not relevant from a national economy's perspective.

1.16 Holdings of debt securities by non-residents (vis-à-vis resident 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 blue in the non-residents column of Table 1.2).

1.17 Additional breakdowns of resident holders by financial corporation sub-sector and by general government sub-sector and of non-resident issuers by country and/or sector may be considered.

The structure of this part of the Handbook

1.18 The structure of Part 2 of the *Handbook on Securities Statistics* is as follows. After this introductory section (Section 1), Section 2 describes the main features of debt securities holdings (positions and flows), focusing on the creditor institutional units and sectors. Section 3 deals with stocks and flows and with the valuation of debt securities holdings. Section 4 addresses specific operations related to debt securities holdings, such as nominee accounts, repurchase agreements, securities lending and short-selling. Section 5 deals with debt securities holdings in a from-whom-to-whom framework, explaining how institutional units are grouped into residents and non-residents, and also by sector and sub-sector. Some additional issues are addressed in relation to from-whom-to-whom positions and flows. Section 6 consolidates the concepts and guidelines outlined in Sections 2 to 5 into detailed presentation tables.

1.19 Part 2 adds three annexes to the *Handbook*: Annex 1 describes the CPIS, which makes a major contribution to the from-whom-to-whom framework for sectors and sub-sectors; Annex 2 explains how to link security-by-security (SBS) databases with securities holdings statistics. Annex 3 describes how groups of corporations as holders of debt securities should be presented.

Section 2 Main features of debt securities holdings

Holders of debt securities

2.1 Institutional units are economic entities that are capable, in their own right, of owning financial assets and of engaging in economic activities and in transactions with other entities (2008 SNA 4.2). Resident institutional units are grouped into mutually exclusive sectors (Part 1 of the *Handbook*, 3.9), and no institutional unit belongs to more than one sector.

2.2 The term “debt securities holdings” refers to the ownership of debt securities (financial assets) by an institutional unit.⁴

2.3 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), of revaluations or of other changes in the volume of assets.

Consolidation

2.4 Consolidation refers to the elimination of positions, transactions, revaluations and other changes in the volume of assets between institutional units that are grouped together for statistical purposes.⁵ Consolidation can arise at various levels of grouping.

2.5 Institutional units can be grouped together or consolidated in two ways. They can be consolidated at a *sub-sector, sector or*

national economy level or at a (*corporate*) *group level*. Consolidation at a sub-sector, sector or national economy level eliminates intra-sub-sectoral, sectoral or national economy holdings of debt securities, while consolidation at a group level eliminates the holdings of debt securities that have been issued by institutional units within the same group of financial or non-financial corporations as the holder.

2.6 Consolidated presentations entail a reduction in statistical information. However, in some cases it may be useful for analytical purposes to present data that have been *consolidated at a sub-sector, sector or national economy level*. One example is debt securities holdings of general government. When these are consolidated, the holdings of debt securities of general government sub-sectors other than central government are consolidated with the corresponding debt securities issues of central government and these debt securities appear in neither issues nor 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 the national definition of money.

2.7 Consolidation at a *corporate group level* is *common practice*. If related institutional units are grouped together to form one corporate group (for example, foreign branches of domestic banks are grouped with their parent bank), then all intra-group positions and flows of debt securities within that reporting entity are eliminated from the reported information—that is, all positions

⁴The term “holdings” is used as a synonym for outstanding amounts (see 2008 SNA 3.4).

⁵Consolidation should be distinguished from netting (see Part 1 of the *Handbook*, 5.13 to 5.16).

and flows among the branches and with their parent are eliminated. This approach is relevant for financial stability analysis (see Annex 3).

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

Criteria to classify debt securities holdings

2.9 Statistics on debt securities held by institutional units may be classified in accordance with four basic criteria: holder (individual or sector, residency or ultimate beneficial owner), currency, maturity and type of interest rate. These classification criteria, which are consistent with existing international statistical standards, are discussed in Section 6 of Part 1 of the *Handbook*.⁶ As a result of group consolidation, a relevant criterion for financial stability analysis, some classifications may depart from these standards.

2.10 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.

Classification by residency, sector and sub-sector of holder

2.11 From a monetary or economic policy perspective, it is important to analyse holdings of debt securities and – in the case of debt securities issued by residents – to know the

⁶The market criterion (location of issue) is relevant only to debt securities issues.

relative size of holdings of residents and non-residents, and within each category, the amounts held by sector and sub-sector. The approach may also be of interest for financial stability analysis, in particular to assess the holdings of non-financial corporations and the household sector.

2.12 Debt securities can usually be held by any resident institutional sector and sub-sector and by non-residents as part of their portfolio of financial assets. Of specific interest are the debt securities holdings of financial corporations, in their capacity as institutional investors, and of households, and to a lesser extent of non-financial corporations and general government. Specific attention is given to non-residents who hold debt securities issued by residents.

Sub-sectors of financial corporations as holders of debt securities

2.13 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 sub-sectors “deposit-taking corporations except the central bank” and “money market funds” (MMFs);
- non-MMF investment funds;
- securitisation corporations;
- insurance corporations;
- pension funds; and
- other financial corporations.^{7,8}

⁷These are financial auxiliaries, captive financial corporations and money lenders and financial intermediaries other than securitisation corporations, like security and derivative dealers, financial corporations engaged in lending, central clearing counterparties and specialised financial corporations, as outlined in *2008 SNA* 4.110. Financial auxiliaries include head offices (of financial corporations) and captive financial institutions and money lenders include holding

2.14 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 sub-set of financial corporations, namely those classified in the sub-sectors:

- investment funds (MMF and non-MMF);
- insurance corporations; and
- pension funds.⁹

Non-residents as holders of debt securities

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

2.16 Non-residents, as holders of debt securities, may also be classified by institutional sector or by sub-sector of financial corporations. If analytically useful, debt securities held by specific countries or groups of countries can be further broken down by sector and sub-sector.

2.17 Two major issues may arise from these breakdowns: (i) confidentiality issues, due to country and sector details; and (ii) challenges in identifying non-resident holdings by institutional sector of holder.

Classification by currency

2.18 Data on the currency composition of the debt securities held by an economy, a resident

institutional sector or sub-sector, a major resident institutional unit or non-residents may be important for financial stability analysis.¹⁰ Economies, sectors, sub-sectors or institutional units may be vulnerable in cases of large exchange rate changes if they hold debt securities that are denominated in foreign currencies or linked to a foreign currency.

2.19 Debt securities holdings may be broken down into holdings denominated in domestic currency and in foreign currencies, possibly with a further breakdown into the most important currencies.

Classification by maturity

2.20 Data on the maturity composition of the debt securities held by an economy, a resident institutional sector or sub-sector, a major resident institutional unit or (in the case of issues of residents) by non-residents can be helpful for financial stability and liquidity analysis.

2.21 Debt securities holdings can be classified into those with a short-term and those with a long-term maturity.

- (a) A debt security with a short-term maturity is defined as one that is payable on demand or in one year or less.
- (b) A debt security with a long-term maturity is defined as one that is payable in more than one year or one that has no stated maturity (*BPM6* 5.103).

2.22 Like debt securities issues, holdings of long-term debt securities may be further broken down into various sub-items (Part 1 of the *Handbook*, 6.18).

2.23 The *Handbook* recommends that holdings of debt securities be presented on an

corporations. It may be necessary to show them separately.

⁸See also the proposed breakdown for debt securities issued by financial corporations (Part 1 of the *Handbook*, 6.7).

⁹See *Institutional investors' assets*, OECD.

¹⁰However, any currency analysis would also need to take into account currency derivatives used for hedging purposes.

original maturity basis, but also that the concept of remaining maturity be used for long-term debt securities holdings with one year or less to redemption.

2.24 Combining original and remaining maturity leads to the following classification (like the one recommended for debt securities issues):

- (a) Short-term, on an original maturity basis;
- (b) Long-term, on an original maturity basis, with a remaining maturity up to and including one year; and
- (c) Long-term, on an original maturity basis, with a remaining maturity of more than one year (Part 1 of the *Handbook*, 6.22).

2.25 Item (a) can be combined with item (b) to derive short-term debt securities on a remaining maturity basis. Alternatively, item (b) can be combined with item (c) to derive long-term debt securities on an original maturity basis.

Classification by interest rate

2.26 A breakdown of holdings of debt securities into fixed and variable interest rate is useful for monetary policy and financial stability analysis. 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 hurt when market interest rates decline.

2.27 A further breakdown of variable interest rate debt securities holdings into inflation-linked, asset price-linked and interest rate-linked instruments may be desirable, depending on their relative importance (Part 1 of the *Handbook*, 6.28 to 6.36).

Classification by country and groups of countries

2.28 Data on holdings of debt securities might follow a country breakdown and a commonly accepted area breakdown also used in financial statistics disseminated by international organisations.

Section 3 Stocks, flows and valuation of debt securities holdings

Accounting rules relating to debt securities holdings

Positions and flows

3.1 Positions in debt securities holdings refer to their outstanding level at a specific point in time. Flows in debt securities holdings refer to the difference between holdings at two consecutive points in time, and consist of transactions between institutional units, revaluations or other changes in volume during the period between such points in time (Part 1 of the *Handbook*, 5.2).

3.2 The relationship between positions and flows for holdings of debt securities is:

$$Position_t - Position_{t-1} = Flows_t \quad (3.1)$$

The term $Position_t$ is the creditor's outstanding holding (of financial assets in the form) of debt securities at the end of the accounting period t and the term $Position_{t-1}$ is the creditor's outstanding holding (of financial assets in the form) of debt securities at the end of the accounting period $t-1$.

3.3 The term $Flows_t$ refers to the changes in outstanding positions between two consecutive points in time. It is the sum of the flows in debt securities, viewed as financial assets, during the accounting period t . It comprises transactions, revaluations and other changes in volume.

$$Flows_t = Transactions_t + Revaluations_t + Other\ changes\ in\ volume_t \quad (3.2)$$

3.4 The term $Transactions_t$ refers to net acquisitions (gross acquisitions less disposals) of debt securities during the accounting period t . Acquisitions also include accrued interest receivable.¹²

$$Transactions_t = Net\ acquisitions_t = Gross\ acquisitions_t - Disposals_t \quad (3.3)$$

The term $Revaluations_t$ refers to the changes in outstanding positions due to changes in the level of clean prices of debt securities during the accounting period t .¹³ Revaluations on assets or on liabilities arise from changes in their prices and/or from changes in exchange rates. In the *BPM6*, revaluations are classified into those that are due to exchange rate changes and those that are due to other price changes" (see *BPM6* 3.20 b). The term *Other changes in volume_t* refers to all changes in

¹²See further explanations in the two sub-sections below on the creditor approach and the debtor approach to recording accrued interest and on dirty and clean prices.

¹³The price of a debt security refers to the clean price. 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. See also the sub-section on dirty and clean prices.

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.

Valuation principles

3.5 Debt securities holdings should be recorded at market value. This is a partial departure from the recommendation for debt securities issues to be presented at both market value and nominal value (see Part 1 of the *Handbook*, 5.17 ff).

3.6 The presentation of debt securities holdings at market value may be based on balance sheet data, but usually requires the availability of reporting schemes based on a security-by-security (SBS) database linked to securities holdings data.

3.7 Positions are valued at the prices at which the debt securities might be bought in markets at the time the balance sheet is drawn up. Values observed in markets or estimated from observed market values should be used.

3.8 Positions in debt securities holdings might exceptionally also be valued at nominal value. However, as positions, transactions and other flows should be recorded with the same value throughout the accounts of all the institutional units involved, debt securities as financial assets should be recorded at market value.

3.9 Transactions in debt securities holdings are valued at the actual price agreed between the institutional units involved in the transaction. 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, but including accrued interest.

Acquisitions and disposals of debt securities

3.10 Like the corresponding section on debt securities issues (Part 1 of the *Handbook*, 5.3 to 5.5), this section covers aggregated data for

transactions in debt securities holdings, i.e. net acquisitions, which are the difference between gross acquisitions and disposals.

3.11 Gross acquisitions and disposals of debt securities are used to analyse securities market activity and income generation.

3.12 Gross acquisitions refer to purchases (i) of newly issued securities from a debtor; or (ii) of existing securities on the secondary market from the previous holder. A gross acquisition is considered to have occurred when claims and obligations arise, usually in exchange for currency or transferable deposits. Gross acquisitions also include accrued interest receivable, as if the accruing interest were paid out and promptly reinvested in the debt securities by the holder.

3.13 Disposals of debt securities refer to sales (i) of securities to the debtor, on maturity or upon redemption at an earlier date; or (ii) of securities on the secondary market to a new holder. A disposal is considered to have occurred when an obligation has disappeared due to redemption or due to a sale on the secondary market, usually in exchange for currency or transferable deposits. Disposals of debt securities are financial transactions: (i) sales of securities to the debtor decrease the holder's financial assets in debt securities and also the debtor's liabilities in debt securities; (ii) sales of securities on the secondary market to a new holder increase the new holder's financial assets and decrease the old holder's financial assets in debt securities (with counterpart entries in currency or transferable deposits). Disposals also include accrued interest payable by the debtor.

Revaluations

3.14 Revaluations or holding gains and losses reflect changes in prices of debt securities holdings. Price rises mean positive revaluations or holding gains, while price falls mean negative revaluations or holding losses on the part of the holder. Revaluations also include changes in the prices of debt securities

holdings in foreign currency due to exchange rate changes.

3.15 When market rates of interest change, the prices of fixed rate debt securities vary 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.

3.16 Revaluations are recorded as they accrue, whether they are realised or not.

3.17 Four different cases are distinguished (2008 SNA 12.81):

- (a) A debt 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 transactions due to accrued interest minus any other change in volume in the accounting period. These values are the estimated values of the securities as if they were to be acquired at the times the balance sheets are drawn up. The revaluation (holding gain or loss) is unrealised;
- (b) A debt 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 transactions due to accrued interest minus any other change in volume in the accounting period preceding the sale. The revaluation (holding gain or loss) is realised;
- (c) A debt 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 transactions due to accrued interest minus any other change in volume in the accounting period after the acquisition. The revaluation (holding gain or loss) is unrealised; and
- (d) A debt 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 transactions due to accrued interest minus any other change in volume in the accounting period between acquisition and disposal. The revaluation (holding gain or loss) is realised.

Other changes in volume

3.18 Other changes in volume of debt securities holdings are changes in the quantity or physical characteristics of debt securities, or changes in classification.

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

- (a) Accidental destruction of bearer securities owing to natural catastrophes or political events, or destruction of evidence of ownership;
- (b) Losses of bearer securities for reasons (such as fire, damage or theft) that are not considered catastrophic;¹⁴
- (c) Uncompensated seizures that occur when 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; and
- (d) 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

¹⁴Accidental destruction or losses of bearer securities are seen as not very common events taking into account that almost all securities are registered electronically.

Box 3.1
Aggregation of debt securities denominated in various national currencies—positions and flows

B.3.1.1 Global aggregates require a method for converting debt securities denominated in various national currencies into one common currency.

B.3.1.2 Debt securities positions and flows (transactions, revaluations and other changes in 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, positions and flows are related according to the equation $\text{Position } (t) - \text{Position } (t-1) = \text{Net flows } (t)$.

B.3.1.3 The example presented in the table describes the aggregation of debt securities denominated in different national currencies.

Aggregation of positions and flows of debt securities denominated in different national currencies

Item	Position at $t-1$	Position at t	Change in positions		Aggregation effect due to different methods for converting changes in positions into currency C
			Revaluation compiled 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 compiled by deriving, first, the changes in positions denominated in currency A and B and then converting the changes in positions into currency C	
Debt security x denominated in currency A	150.00	100.00		-50.00	
Debt 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	
Debt security x denominated in currency C	125.00	66.67	-58.33	-37.04	21.30
Debt security y denominated in currency C	26.09	38.10	12.01	9.09	2.92
Total	151.09	104.76	-46.33	-27.95	18.38

Box 3.1**(concluded)**

B.3.1.4 When positions and flows of debt securities denominated in various national currencies are converted into a common currency, Table B.3.1 shows that the change in positions in terms of currency C can be compiled in two ways: either (i) the positions in currency A and in currency B are converted into currency C and the changes in positions are derived afterwards; or (ii) the changes in positions are compiled first in terms of currency A and B and then converted into currency C. In this context, the figure -46.33 represents an estimate of the revaluation of the debt securities holdings, under the assumption that the positions in debt securities have been converted first into positions denominated in the common currency C and the difference in positions derived thereafter. The figure -27.95 represents an estimate of the revaluation, which has been derived by compiling first the differences in positions and then converting the changes in positions into the common currency C.

B.3.1.5 The changes in positions according to these two methods are different; the size of the difference (interpreted as an aggregation effect) depends on the volatility of the exchange rates involved. As a convention, the first method of aggregating positions and flows denominated in various currencies in a common currency is recommended.

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 of the total economy.¹⁵

3.20 Changes in classification comprise changes in sector classification and in the structure of institutional units and changes in the classification of assets.

- (a) Reclassifications of institutional units from one sector to another or changes in the structure of institutional units give rise to a reallocation, and may cause the appearance and disappearance of certain financial assets, which should be recorded as other changes in volume (Part 1 of the *Handbook*, 5.11).

- (b) When a corporation disappears as an independent legal entity because it is absorbed by one or more other corporations, all the financial assets in the form of debt securities that existed between that corporation and those that have absorbed it, disappear. Financial assets in the form of debt securities that existed between the absorbed corporation and third parties remain unchanged and pass to the absorbing corporation(s);
- (c) 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 debt securities (appearance of financial assets) are recorded as other changes in volume.

3.21 Changes in the classification of assets, e.g. 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

¹⁵Changes 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.

forgiveness) are recorded as transactions between the creditor and the debtor.

Quadruple-entry accounting and time of recording

3.22 Following the principle of quadruple-entry accounting as applied in the System of National Accounts (Part 1 of the *Handbook*, 5.6 to 5.9), the acquisition or disposal of a debt security should result in the recording of four entries, i.e. two for each institutional unit involved in the transaction. These are either (i) the holder or creditor and the issuer or debtor of the debt security; or (ii) two holders of the debt security (the new holder receiving debt securities and the old holder delivering debt securities).

3.23 For example, a debt security is issued by a non-financial corporation (the debtor) and is acquired by a household (the creditor) in exchange for currency or transferable deposits. In the financial account of the non-financial corporation, an increase in liabilities (debt securities) and an increase in assets (currency or transferable deposits) are recorded. In the financial account of the household, an increase in assets (debt securities) is offset by a decrease in assets (currency or transferable deposits), with no change in liabilities recorded.

3.24 If the debt security held by the 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 assets (debt securities) is offset by a decrease in assets (currency or transferable deposits) or by an increase in liabilities (bank account vis-à-vis the household).

3.25 The general principle is that these transactions between institutional units should be recorded when claims and obligations arise, are transformed or are cancelled, i.e. on an accrual basis (2008 *SN.A* 2.55).

The debtor approach and the creditor approach to recording accrued interest

3.26 The question of how to record accrued interest on debt securities depends on which method of accrual is used: the *debtor approach* or the *creditor approach*.¹⁶ It reflects a long-standing inconsistency in business accounting. Book value financial accounting and reporting follows the approach that debtors should report interest due and accrued on their outstanding debt. However, asset holders do not record only interest under revenues from debt securities. Rather they use a net yield concept that comprises interest due and accrued, including or excluding the current period amortisation of the acquisition cost of the debt security asset(s). This means that across the institutional sectors of an economy, interest payments and receipts are not equal.

3.27 Institutional sector accounts based on international statistical standards address this inconsistency. As a first step, debt securities should be valued at market prices; and, as a second step, accrued interest can be measured using either the debtor or the creditor approach. International statistical standards recommend the debtor approach, according to which accrued interest (and other flows, such as revaluations) is defined from the perspective of the issuer of debt securities.

3.28 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 to say, 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 10 years. The argument for this approach is that because the rate has been fixed contractually, the payment does not change when the market interest rate changes.

¹⁶ They are also characterised as on a “historical/contractual” basis and on a “prevailing market rate” basis.

The debt securities are issued at a fixed rate precisely because the borrower decided to finance its requirements this way, with the borrowing costs known over the life of the debt instrument. If the debtor had been interested in borrowing at rates that changed with market rates, the borrowing would have been undertaken at a variable interest rate.

3.29 Under the *creditor* approach, the prevailing market rate during the period is used to determine the interest paid on a debt security. The argument put forward for this

approach is that the rate of interest on a 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. There is no fixed rate of interest, since the rate is based on the observable rate of interest prevailing on the market during the period. As interest flows apply to a period of time and interest rates change almost constantly, the average of the prevailing rate applicable to the debt security over the period is used.

Box 3.2

Debtor approach and creditor approach to recording accrued interest

B.3.2.1 Suppose a zero-coupon bond is issued on 1 January of year 1. The bond matures on 31 December of year 3 with a redemption value of 100. The discount (interest) rate at the time of issuance is 10%. Therefore, the value of the bond at issuance is 75.13. The market interest rate remains at 10% until 1 January of year 2, when it moves to 15%. 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.

B.3.2.2 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 account and balance sheet). The creditor would record corresponding entries, but on opposite sides of the accounts.

B.3.2.3 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.

B.3.2.4 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).

B.3.2.5 Under the creditor approach, the rise in the market interest rate at the beginning of year 2 is fully reflected in the revaluation (the market value changes from 82.64 to 75.61 ($=-7.03$)) while interest accrues in the amount of 11.34 in year 2 ($=75.61 \cdot 0.15$). As there is no change in the market value in year 3, no revaluation is recorded, while interest accrues of 13.04 ($86.96 \cdot 0.15$).

Box 3.2
(concluded)
**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	
+ Accrued interest due to discount		7.51	7.51	7.51 +8.26 =15.77	7.51 +8.26 +9.09 =24.86	24.86
= 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 +8.26 =15.77	7.51 +8.26 +9.09 =24.86	24.86
Revaluation on liabilities in debt securities			-7.03	+3.09	3.95	
Liabilities in debt securities	75.13	82.64	75.61	86.96	100.00	
Creditor approach						
Interest payable		7.51	7.51	7.51 +11.34 =18.85	7.51 11.34 +13.04 =31.89	31.89
Revaluation on liabilities in debt securities			-7.03	0.00	0.00	
Liabilities in debt securities	75.13	82.64	75.61	86.96	100.0	

3.30 There are no differences between the two approaches if the value of the debt security remains unchanged throughout its life. However, as the market values of debt securities do in practice vary during their life, and as they are usually bought and sold on secondary markets, the recording of revaluations and also of realised holding gains and losses in accordance with the debtor approach deviates from the corresponding recording following the creditor approach, as illustrated in the example described in Box 3.2.

3.31 The ability to compile accurate accounts on either the debtor or creditor basis hinges on the availability of SBS databases.

**The effect of the coupon payments:
dirty and clean prices**

3.32 The dirty price of a debt security is the market price (including accrued interest), while the clean price does not include accrued interest due to coupon. Debt securities

Box 3.3**Dirty and clean prices of debt securities**

B.3.3.1 To illustrate the effect of coupon payments, an example is used which is described in Annex 3 of Part 1 of the *Handbook* (example (ii)). In this 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, correspond to a 10% rate of interest. The bond accrues annually two types of interest: (a) a coupon of 73.6; and (b) an annual discount, which is calculated as 19.2 for the first year. At the end of the first year, interest of 92.8 has accrued, but only 73.6 of this accrued interest are paid to the bond holder. This reduces the principal amount outstanding, in nominal value terms, from 992.8 to 919.2. The accrued discount of 100 is only paid at the end of the fifth year as part of the redemption price.

B.3.3.2 The following table shows the market value (the dirty price) of the bond, the market price without the accrued interest due to coupon (the clean price) and the accrued interest due to coupon.

The dirty price and the clean price of a five-year fixed interest rate bond

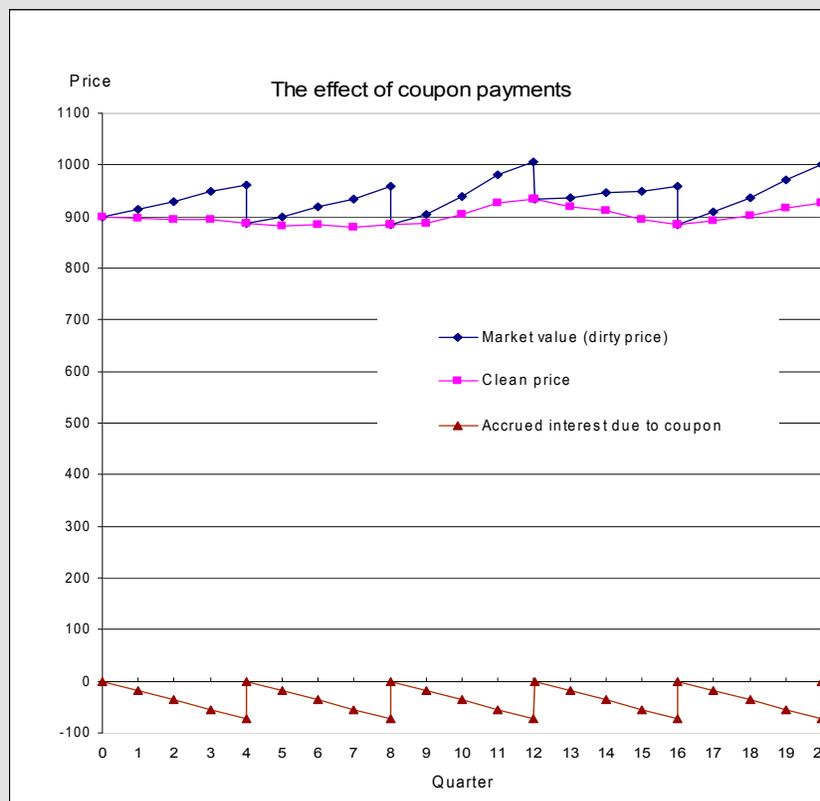
Point in time	Market value (dirty price)	Market value excluding accrued interest due to coupon (clean price)	Accrued interest due to coupon
Beginning of quarter 1	900.0	900.0	0.0
End of quarter 1	915.0	897.1	-17.9
End of quarter 2	930.0	893.8	-36.2
End of quarter 3	950.0	895.3	-54.7
Up to end of quarter 4	960.7	887.1	-73.6
End of quarter 4 = beginning of quarter 5	887.1	887.1	0.0
End of quarter 5	900.0	882.1	-17.9
End of quarter 6	920.0	883.8	-36.2
End of quarter 7	935.0	880.3	-54.7
Up to end of quarter 8	958.5	884.9	-73.6
End of quarter 8 = beginning of quarter 9	884.9	884.9	0.0
End of quarter 9	905.0	887.1	-17.9
End of quarter 10	940.0	903.8	-36.2
End of quarter 11	980.0	925.3	-54.7
Up to end of quarter 12	1,006.5	932.9	-73.6
End of quarter 12 = beginning of quarter 13	932.9	932.9	0.0
End of quarter 13	937.0	919.1	-17.9
End of quarter 14	947.0	910.8	-36.2
End of quarter 15	950.0	895.3	-54.7
End of quarter 16	958.6	885.0	-73.6
End of quarter 16 = beginning of quarter 17	885.0	885.0	0.0
End of quarter 17	910.0	892.1	-17.9
End of quarter 18	937.0	900.8	-36.2
End of quarter 19	970.0	915.3	-54.7
Up to end of quarter 20	1,000.0	926.4	-73.6

Box 3.3

(concluded)

B.3.3.3 The chart reflects the smooth path of the clean price and the saw-tooth pattern of the dirty price of the bond.

The dirty price and the clean price of a five-year fixed interest rate debt security



provide for coupon payments to be made to holders in accordance with a fixed schedule.¹⁷

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

3.34 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, the coupon rate and the number of days from the preceding coupon payment date (the debtor approach).

3.35 The clean price reflects more closely changes in value due to issuer risk and changes in the structure of interest rates. Its graph is smoother than that of the dirty price.

¹⁷With exceptions, such as zero coupon bonds.

Use of the clean price also serves to distinguish interest accrued (based on the coupon rate) from revaluations (see the example described in Box 3.3).

3.36 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.

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

Section 4 Specific operations related to debt securities holdings

Reverse transactions

Main features

4.1 Reverse transactions are 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. Reverse transactions have two common characteristics: (i) a commitment to reverse the transaction on a specified future date (or on demand), and (ii) although legal ownership is transferred to the purchaser, all of the risks and benefits of ownership remain with the original owner. These transactions include: (a) securities repurchase agreements (repos); (b) securities lending; and (c) sell/buy-back transactions (2008 *SNA* A4.46).

4.2 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. Accordingly, the securities provided under reverse transactions are treated as not having changed economic ownership because the lender still receives the income yielded by the security (since coupon payments and dividends are passed on in the form of a “manufactured dividend”) and remains subject to the risks or benefits of any change in the price of the security.

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

4.4 A reverse transaction may be with or without 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 debt securities remain on the balance sheet of the original holder, the counterpart to the exchange of cash is recorded as a loan received (or as a deposit, if the entry appears on the liability side of the balance sheet of a deposit-taking corporation). The exchange of funds under reverse transactions does not involve the issuance of any new debt 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 the 2008 *SNA* and the *BPM6* do not require any transaction to be recorded.

4.5 Table 4.1 provides an overview of the main features of 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 titles pass 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.

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

4.7 A repurchase transaction (purchase and repurchase) is usually legally considered to be one transaction, whereas a sell/buy-back transaction is considered to be a separate purchase and sale (i.e. two transactions, although, again, no transaction in the securities exchanged is recorded). The main difference between repurchase transactions and sell/buy-back 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/buy back transactions the coupon payment is included as part of the price of the second leg of the trade.

4.8 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.

4.9 In cases of collateral other than cash, the parties negotiate a fee, quoted as an annualised percentage of the value of the securities lent. Thus the fees for securities lending without cash collateral reflect payments 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* 11.66).

Reverse transactions with cash collateral

4.10 A repo 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. Repos, securities lending with cash collateral and sell/buy backs all involve the provision of securities as collateral for a loan or a deposit (*2008 SNA* and *BPM6*). Buy/sell-backs and sell/buy-backs are repo-type agreements consisting of a combination of a spot transaction and a forward transaction.

4.11 The debt securities provided under a repo are regarded as still being economically owned by the security-providing party (*BPM6* 5.51 to 5.54). A repo is viewed from the perspective of the provider of the securities (i.e. "the cash taker"). The agreement is called a reverse repo when viewed from the perspective of the securities receiver (i.e. the "cash provider").

4.12 The supply and receipt of funds under a repo is treated as a loan or as a deposit. It is generally a loan, but a deposit if the borrower of cash (i.e. the seller of securities) is a deposit-taking corporation, in which case the liability may be included in national measures of broad money.

Reverse transactions without cash collateral

4.13 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 their legal ownership has changed, the securities provided as collateral under a reverse transaction are treated as not having changed economic ownership. Therefore, no transaction should be recorded. Securities lent remain the assets of the delivering unit, and securities received as collateral continue to be recorded as financial assets of the institutional unit lodging the collateral.

Table 4.1

Main features of reverse transactions

Feature	Securities lending		Repurchase agreements (based on specific securities or general collateral)		Sell/buy-back 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 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)

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.

4.14 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 the legal ownership is 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

4.15 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 them to 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.

4.16 Securities lent or borrowed change legal ownership, but not economic ownership. When debt securities are sold short, both the security lender (the original owner of the security) and the purchaser of the security sold short are the legal and economic owners, as they are both subject to the risks and benefits of the security. The security can only be legally owned by one party. In this case, the purchaser is the legal owner. To avoid double-counting, a negative 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.

Depository receipts

4.17 Depository receipts represent ownership of securities issued in other economies; ownership of the depository receipts is treated as direct ownership of the underlying securities. The depository issues receipts listed on one exchange that represent ownership of securities listed on another exchange. Depository receipts facilitate transactions in securities in economies other than the one in which they are listed. The underlying securities may be shares or debt securities.

4.18 Financial investors frequently prefer to acquire securities in financial markets where payment and settlement systems, registration procedures and other arrangements are familiar, rather than in the home market of the issuer. The potential for double counting lies in the existence of both the underlying security, held by the depository, and the depository receipts. That is, two securities could be reported as held, when only one liability exists.

4.19 Where possible, depository receipts should be recorded in such a way that the financial institution “issuing” the receipts should be “looked through”; that is, the holder of the receipts should be considered to have a claim on the issuer of the underlying securities.

4.20 These receipts should be allocated to the country of residence of the issuer of the original (or underlying) security and not to the residence of the financial institution that issues the receipts. In other words, American depository receipts (ADRs) are liabilities of the non-US institutional unit whose securities underlie the ADR issue and not of the US financial institution that issued the ADRs.

4.21 Financial intermediaries should not report holdings of any securities issued by non residents against which depository receipts have been issued and sold. If a depository receipt has been issued before the financial institution arranging the issue has acquired the original (or underlying) securities, then that financial institution should report a negative holding of the original (or underlying) securities.

Stripped securities

4.22 Stripped 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 asset-backed securities.

4.23 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 clearing house, until such time as it is reconstituted or redeemed.

4.24 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

4.25 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 beneficial owner, not the nominee.

4.26 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 non-resident 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. In such cases, efforts should be made to encourage the custodian to obtain the residence of the beneficial owner from the nominee.

Section 5 Debt securities holdings in a from-whom-to-whom framework

The from-whom-to-whom framework

5.1 A from-whom-to-whom framework allows for a detailed presentation of financing and financial investment via debt securities, which has a number of uses. In a broader context, it permits the analysis of relationships between institutional sectors and sub-sectors within an economy and also between these sectors and sub-sectors and non-residents (broken down even further by country and sector). Such an analysis sheds light on sectoral compositions of assets and liabilities, and on potential strengths and vulnerabilities in portfolios.

5.2 This framework allows questions to be answered like: who is financing whom, in what amount and with which type of debt security. It may also allow questions to be answered, such as: On which other resident sectors do the debt securities held by, for instance, households represent claims? On which resident sectors do the debt securities held by non-residents represent claims? Or, from the side of the issuer of debt securities, how important are issues of general government held by households or by financial corporations (and by which sub-sectors)? How significant are general government issues held by non-residents?

5.3 The presentation of debt securities holdings in a from-whom-to-whom framework or by debtor/creditor¹⁸ represents an extension of the presentation of unconsolidated debt securities holdings without any counterpart sector or residency information, as outlined in connection with Table 1.2 in Section 1.

5.4 Table 1.2 in Section 1 shows a breakdown by debtor (issuing) sector of the positions (or, in the case of transactions, the net acquisitions) of debt securities (thus showing the sectors on which the debt securities represent claims) and a breakdown by creditor (holding) sector of positions or transactions in debt securities (showing the sectors acquiring debt securities). This presentation thus provides information on debtor/creditor relationships and is consistent with a from-whom-to-whom framework.

5.5 For each type of debt security (as position or flow), a from-whom-to-whom framework has two dimensions:

- (a) The (residency, sector or sub-sector of the) debtor; and
- (b) The (residency, sector or sub-sector of the) creditor.

¹⁸The 2008 SNA uses the term flow of funds (see 2008 SNA Chapter 27).

Table 5.1

**From-whom-to-whom financial transactions in debt securities
unconsolidated**

Holder by residency and by resident sector		Residents					Non- residents	All holders
		Non- financial corporations	Financial corporations	General government	Households and non- profit institutions serving households	All residents		
Residents	Non- financial 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 non- profit institutions serving households	—	—	—	—	—	—	—
	All residents	108	70	13	232	423	106	529
Non-residents		34	12	19	43	108		
All issuers		142	82	32	275	531		

5.6 A from-whom-to-whom framework requires three-dimensional tables covering the breakdowns of the debt security, the debtor and the creditor.¹⁹ Such tables show positions, transactions and other flows cross-classified by debtor sector and creditor sector.

¹⁹The time series aspect of the from-whom-to-whom framework may be seen as the fourth dimension.

5.7 Table 5.1 is a from-whom-to-whom presentation for transactions in debt securities. It is the same type of table as presentation table B above (Table 1.2 in Section 1) and shows, for instance, in its fourth column that households and non-profit institutions serving households acquired (net of disposals) debt securities of 275; this acquisition reflects an increase in their claims on non-financial corporations (65), financial corporations (43), general

government (124) and the rest of the world (43).

5.8 Table 5.1 indicates that, for example, as a result of transactions in the reference period, non-financial corporations issued (net of redemptions) debt securities of 147, as reflected in the first row. Their liabilities in this form to other non-financial corporations increased by 30, to financial corporations by 23, to general government by 5, to households and non-profit institutions serving households by 65 and to the rest of the world by 24. Conversely, no debt securities were issued by households and non-profit institutions serving households.

5.9 Table 5.1 also presents intra-sectoral transactions of resident sectors in debt securities holdings (the diagonal cells). For instance, non-financial corporations issued debt securities of 30 that are being held by other institutional units of the same sector. These transactions are not covered 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 the latter and the rest of the world, but not the transactions within the same resident sectors.²⁰

5.10 Transactions in debt securities held by residents and issued by non-residents are reflected in the “non-residents” row. The amount is 108. Transactions in debt securities held by non-residents and issued by residents are shown in the “non-residents” column. The amount is 106. Transactions in debt securities held by non-residents and issued by non-residents are not covered (black cell).

5.11 Table 5.1 also shows that, by definition, all transactions in debt securities held by

residents (vis-à-vis resident and non-resident issuers) (531) and held by non-residents (vis-à-vis resident issuers) (106) are equal to all transactions in debt securities issued by residents (vis-à-vis resident and non-resident holders) (529) and in debt securities issued by non-residents (vis-à-vis resident holders) (108). The total amount is 637. Table 5.2 presents Table 5.1 in a time series format.

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

5.13 The complexity of from-whom-to-whom tables for debt securities is determined by the detail of the breakdowns chosen for debt securities (by sub-category, position and sub-position) and for the creditors and debtors (by residency, sector and sub-sector).

5.14 Combining these breakdowns leads to a rather large number of from-whom-to-whom relationships, especially as the data may need to be shown as positions and flows. Accordingly, a selection by debt security sub-category, sector and sub-sector is essential.

The transactor principle versus the debtor/creditor principle

5.15 Two types of financial transactions in debt securities may be distinguished. The first type, issues and redemptions of debt securities, involves only the debtor and one creditor. The second type, transactions on secondary markets, involves three institutional units: the two creditors exchanging the debt security, and the institutional unit whose liability it is. Sometimes, as in the case of the assumption of a debt, the three institutional units may be two debtors and a creditor.

5.16 The involvement of three parties complicates the recording of secondary market transactions, because the positions between the issuer and the seller and between the issuer and the buyer change.

²⁰Totals by issuer refer to issues and redemptions only; totals by holder refer to issues, redemptions and transactions in the secondary market.

Table 5.2

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				
Non-financial corporations				
Issued by				
Non-financial corporations	30			
Financial corporations	11			
General government	67			
Households and non-profit institutions serving households	—			
All residents	108			
Non-residents	34			
All issuers	142			
Financial corporations				
Issued by				
Non-financial corporations	23			
Financial corporations	22			
General government	25			
Households and non-profit institutions serving households	—			
All residents	70			
Non-residents	12			
All issuers	84			
General government				
Issued by				
Non-financial corporations	5			
Financial corporations	2			
General government	6			
Households and non-profit institutions serving households	—			
All residents	13			
Non-residents	19			
All issuers	32			
Households and non-profit institutions serving households				
Issued by				
Non-financial corporations	65			
Financial corporations	43			
General government	124			
Households and non-profit institutions serving households	—			
All residents	232			
Non-residents	43			
All issuers	275			
All residents				
Issued by				
Non-financial corporations	123			
Financial corporations	78			
General government	222			
Households and non-profit institutions serving households	—			
All residents	423			
Non-residents	108			
All issuers	531			
Non-residents				
Issued by				
Non-financial corporations	24			
Financial corporations	28			
General government	54			
Households and non-profit institutions serving households	—			
All residents (= all issuers)	106			
All holders				
Issued by				
Non-financial corporations	147			
Financial corporations	106			
General government	276			
Households and non-profit institutions serving households	—			
All residents	529			

5.17 A financial transaction between two institutional units, as holders (creditors) of a debt security, e.g. a change in ownership of a debt security between institutional unit A, the original holder, and institutional unit B, the new holder, in a different (sub-)sector from A may therefore be recorded either:

- (a) As a change in ownership of a debt security between the two creditors with reclassification entries in the other changes in volume of assets account of the debtor, reflecting the fact that the creditor is now in a different sector. In this approach, the secondary market transaction is recorded in the accounts as a single transaction accompanied by a reclassification adjustment; or
- (b) As the extinction of the claim (the debt security) of creditor A against the debtor and the creation of a claim (the debt security) of creditor B against the debtor.

In this approach the secondary market transaction is recorded as two transactions.

5.18 The first approach gives prominence to the contract between the creditors (transactor principle) while the second approach emphasises the contract between the debtor and the creditors (debtor/creditor principle) as shown in Diagram 5.1.

The transactor principle

5.19 The transactor principle captures the change in ownership of a financial asset (or the change of debtors in the case of the assumption of a debt) in the accounts of the transactors involved, but not in the account of the debtor (or of the creditor where one institutional unit takes on the liability of another).

Diagram 5.1

The transactor principle and the debtor/creditor principle

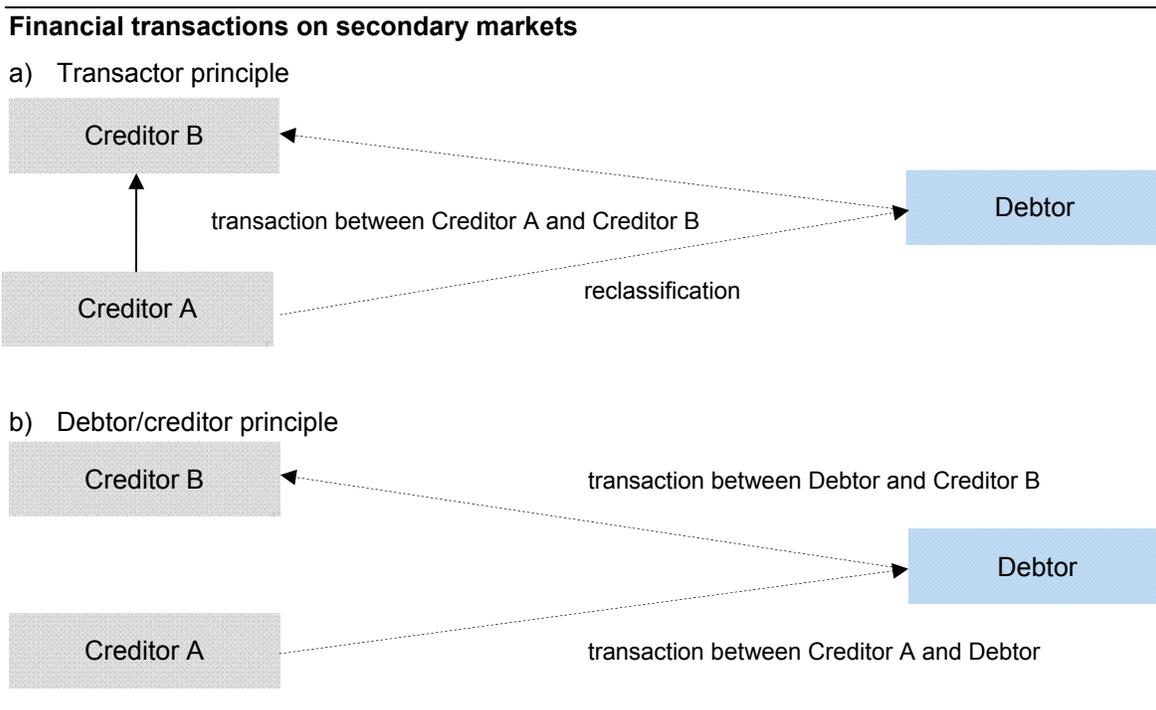


Table 5.3

Recording of an acquisition of debt securities by households from financial corporations in accordance with the transactor principle

Financial assets	Liabilities	Financial assets	Liabilities
Households		Non-financial corporations	
- Currency			+ other change in liabilities vis-à-vis households
+ Debt securities			
Financial corporations			
+ Currency			- other change in liabilities vis-à-vis financial corporations
- Debt securities			

5.20 Thus, under the transactor principle, a change in ownership of a debt security is recorded without taking into consideration the involvement of the debtor. For example, when a household buys from a financial corporation a debt security issued by a non-financial corporation, following the transactor principle a single transaction in debt securities is recorded, as shown in Table 5.3 (i.e. between a financial corporation and a household), without the change of ownership being reflected in the account of the debtor, as the issuer of the debt security (the non-financial corporation).

5.21 To reflect the change in the counterpart creditor sector in the account of the debtor, a reclassification of the creditor is recorded in the other changes in the volume of assets account of the debtor non-financial corporation. The numerous secondary market transactions in debt securities would necessitate many such reclassifications, which would not help analysis. Therefore, while it is appropriate for the recording of transactions and positions without taking into account the debtor/creditor relationship, the transactor principle is not recommended in the context of a from-whom-to-whom framework.

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

(a) The transactors (creditors CA and CB);

- (b) The type and value of the debt security transacted; and
 (c) The debtor (D).

The approach could be summarised as: debt security transacted; CA, CB; D

5.23 The collection of data on individual transactions leads to an immense amount of detailed statistical information because of the rather frequent day-to-day trading of debt securities. Information on both transactors would be available to custodians or stock exchanges.²¹ Otherwise, if no transaction data are available, only the positions of holders of debt securities can be identified. Accordingly, statistical collection systems do not usually provide detailed information on transactions, but rely on position data.²² As a consequence, the transactor principle cannot always be applied, because the detailed information required on transactors cannot be provided by institutional units.

²¹In many cases, the transactor approach shows transactions vis-à-vis brokers and other intermediaries, and not necessarily vis-à-vis the “ultimate” owners.

²²Some economies do directly capture transactions data, usually on a net asset or liability basis, as requested in *BPM6* for portfolio transactions. Capturing these data is a practical challenge.

Table 5.4

Recording of an acquisition of debt securities by households from financial corporations in accordance with the debtor/creditor principle

Financial assets	Liabilities	Financial assets	Liabilities
Households		Non-financial corporations	
– Currency		+ Currency	
+ Debt securities vis-à-vis non-financial corporations			+ Debt securities vis-à-vis households
Financial corporations			
+ Currency		– Currency	
– Debt securities vis-à-vis non-financial corporations			– Debt securities vis-à-vis financial corporations

The debtor/creditor principle

5.24 The debtor/creditor principle captures a transaction between two institutional units in the accounts of the two transactors, and also permits the change in creditor to be recorded in the financial account of the debtor (or, in the case of, for example, the assumption of a debt, the change in debtor to be recorded in the financial account of the creditor).

5.25 Thus, when the ownership of a debt security changes, the debtor/creditor principle records the two links as financial transactions. When a debt security issued by a non-financial corporation is sold by a financial corporation to a household, the financial account of the non-financial corporation records an issuance of debt securities to a household and a corresponding repayment to a financial corporation. Financial transactions involving three institutional units are recorded as shown in Table 5.4.

5.26 The sale of a security issued by a resident or non-resident institutional unit (the debtor) to another institutional unit (resident or non-resident) (the two creditors)

clearly conforms to the SNA definition of a transaction (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.

5.27 Symmetry of treatment between asset holders and liability issuers would require that the issuer treat the event as a transaction (a concurrent redemption and new issue, netting to zero net issuance).

5.28 This approach is further justified by implicit or explicit conditions accepted by the issuer when creating a debt security. When the issue requires the debtor to record the owners of the securities in the debtors liability register, the two creditors will inform the debtor of the change in ownership and by recording the event the debtor acknowledges the secondary market transaction. In the case of bearer securities (i.e. no registration requirements) the issuer will repay the bearer at maturity irrespective of how many secondary market transactions may have taken place, implicitly recognising secondary market transactions. The secondary market transaction is re-routed via the debtor, reflecting the debtor's implicit or explicit recognition of the transaction.

Box 5.1
Detailed recording of debt securities following the debtor/creditor principle

B5.1.1 Position data are usually available with information on the holder (Creditor B) and on the debtor (D) of debt securities at a specific point in time, but not on the transactor from whom the debt securities were bought (Creditor A).

B5.1.2 Transactions may then be derived, residually, as the difference in positions between the beginning and the end of a period, minus any other flows:

$$\text{Transactions}_t = \text{Position}_t - \text{Position}_{t-1} - \text{Revaluations}_t - \text{Other changes in volume}_t$$

B5.1.3 Based on the available information on positions, this approach complies with 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.

B5.1.4 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.

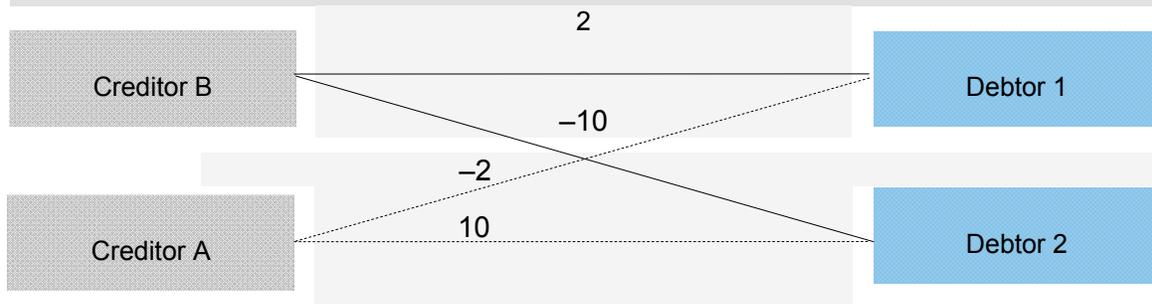
Detailed recording following the debtor/creditor principle

		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

Box 5.1**(concluded)**

B5.1.5 In parallel, the net acquisition of -10 (a disposal) has to be recorded by Creditor B and a redemption of debt securities by Debtor 2. A corresponding new issue of 10 of debt securities 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, and they replace the actual secondary market transactions in debt securities by the two holders. The effect is to preserve the link between the transactions data and the change in the from-whom-to-whom positions data.

B5.1.6 The transactions to be recorded for this example following the debtor/creditor principle are illustrated in the following diagram.

Transactions according to the debtor/creditor principle

B5.1.7 The set of information required to apply the debtor/creditor principle consists of: (a) a security-by-security database that allows each issuance of a debt security to be identified (information on the debtor and the initial creditor); and (b) the link between the security-by-security database and the appropriate securities holding statistics which keeps track of changes in the debt securities positions of creditors and includes information on the individual debtors (see Annex 2 of Part 2 of the *Handbook*).

Section 6 Detailed presentation tables

6.1 This section refers to stylised detailed presentation tables:

- presentation table A (Table 1.1 in Section 1), following the residence of holder approach;
- presentation table B (Table 1.2 in Section 1), following the from-whom-to-whom approach; and
- presentation tables with global aggregates for debt securities.

Presentation tables based on the residence of holder approach

6.2 The presentation table A (Table 1.1) 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, whereas 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 by the residency or resident sector of issuers, and the debt securities issued by residents and held by non-residents are also shown.

6.3 This sub-section outlines four possible classifications for presenting statistics on

debt securities holdings following the residence of holder approach: by holder, currency, maturity and interest rate. Table 6.1 reflects the approach and shows these categories.

6.4 Several two-dimensional tables are presented below, which break down debt securities held by resident sectors, resident financial corporation sub-sectors and non-residents by currency, maturity and interest rates.

6.5 The breakdown by financial corporation sub-sector 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

6.6 Table 6.2 shows debt securities held by resident sectors, by resident financial corporation sub-sectors and non-residents broken down by residency of issuer and by currency of denomination. A split into domestic currency and foreign currencies is recommended.

Debt securities holdings classified by holder and maturity

6.7 Table 6.3 shows debt securities held by resident sectors, resident financial corporation sub-sectors and non-residents broken down by maturity. A split into short-term and long-term original maturity is

Table 6.1

Debt securities classified by holder, currency, maturity and interest rate

Issuer by residency and by currency, maturity and type of interest rate		Holder					Non-residents	All holders
		Non-financial corporations	Financial corporations	General government	Households and non-profit Institutions serving households	All residents		
Residents	Currency							
	Maturity							
	Interest rate							
Non-residents	Currency							
	Maturity							
	Interest rate							
All issuers	Currency							
	Maturity							
	Interest rate							

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

6.8 Table 6.4 shows debt securities held by resident sectors, resident financial corporation sub-sectors and non-residents broken down by type of interest rate. A split into fixed interest rate and variable interest rate is recommended. However, debt securities with a complex interest rate structure may be separated from this breakdown. The third row of the breakdown by type of interest rate represents debt securities held for all types of interest rates.

Debt securities holdings classified by holder: positions and flows

6.9 Table 6.5 shows the positions, transactions, revaluations and other changes in the volume of assets for debt securities held by resident sectors, resident financial corporation sub-sectors and non-residents and issued by residents and non-residents. 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 (gross acquisitions and disposals).

Table 6.2

Debt securities classified by residency, resident sector and resident financial sub-sector of holder, by residency of issuer and by currency denomination

Holder Issuer by residency and by currency denomination		Residents											Non-residents	All holders
		Non-financial corporations	Financial corporations						General government	Households and non-profit institutions serving households	Memo item: public sector			
			Central bank	Other money-issuing corporations	Non-MMF investment funds	Securitisation corporations	Insurance corporations	Pension funds				Other financial corporations		
Residents	Domestic currency													
	Foreign currencies													
	All currencies													
Non-residents	Domestic currency													
	Foreign currencies													
	All currencies													
All issuers	Domestic currency													
	Foreign currencies													
	All currencies													

Presentation tables based on the from-whom-to-whom approach

6.10 The stylised presentation table B (Table 1.2 in Section 1) is based on the “from-whom-to-whom” approach. It shows positions, transactions, revaluations and other changes in the volume of assets for debt securities held by resident sectors and by non-residents, with a breakdown by institutional sector for resident issuers (the cells of Table 6.6 shaded light grey). Furthermore, holdings of non-residents of

debt securities issued by residents are shown (penultimate column) and also debt securities issued by non-residents and held by resident sectors (penultimate row). However, holdings of non-residents of debt securities issued by non-residents are not covered (black cells).

6.11 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 6.6 shaded in dark grey).

Table 6.3

Debt securities classified by residency, resident sector and resident financial sub-sector of holder, by residency of issuer and by maturity

Issuer by residency and by maturity		Holder		Residents										Non-residents	All holders	
		Non-financial corporations	Central bank	Financial corporations						General government	Households and non-profit institutions serving households	Memo item: public sector				
				Other money-issuing corporations	Non-MMF investment funds	Securitisation corporations	Insurance corporations	Pension funds	Other financial corporations							
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 one year</i>															
	All maturities															
Non-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 one 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 one year</i>															
	All maturities															

6.12 Three-dimensional tables in a from-whom-to-whom framework add to the two-dimensional tables a breakdown or a combination of breakdowns of debt securities by sub-category (currency, maturity and interest rate).

Debt securities holdings in a from-whom-to-whom framework classified by holder, issuer and currency

6.13 Table 6.7 shows debt securities held by resident sectors and by non-residents

Table 6.4

Debt securities classified by residency, resident sector and resident financial sub-sector of holder, by residency of issuer and by type of interest rate

Issuer by residency and by type of interest rate		Holder		Residents										Non-residents	All holders	
		Non-financial corporations	Central bank	Financial corporations						General government	Households and non-profit institutions serving households	Memo item: public sector				
				Other money-issuing corporations	Non-MMF investment funds	Securitisation corporations	Insurance corporations	Pension funds	Other financial corporations							
Residents	Fixed interest rate															
	Variable interest rate															
	All interest rates															
Non-residents	Fixed interest rate															
	Variable interest rate															
	All interest rates															
All issuers	Fixed interest rate															
	Variable interest rate															
	All interest rates															

broken down vis-à-vis resident issuers by sector and non-resident 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 non-residents in all currencies.

Debt securities holdings in a from-whom-to-whom framework classified by holder, issuer and maturity

6.14 Table 6.8 shows debt securities held by resident sectors and by non-residents broken down vis-à-vis resident issuers by sector and non-resident issuers. Debt securities holdings

are further split into short-term and long-term original maturity. The fourth row of the maturity breakdown represents debt securities held for all maturities.

6.15 A memorandum item shows debt securities holdings with long-term original maturity that have a remaining maturity up to and including one year.

Debt securities holdings in a from-whom-to-whom framework classified by holder, issuer and interest rate

6.16 Table 6.9 shows debt securities held by resident sectors and by non-residents broken down vis-à-vis resident issuers by sector and non-resident issuers. Debt securities holdings are further split into fixed interest rate and

Table 6.5

Debt securities classified by residency, resident sector and resident financial sub-sector of holder and by residency of issuer positions, transactions, revaluations and other changes in the volume of assets

Issuer by residency and by positions net acquisitions, revaluations and other changes in the volume of assets		Holder	Residents										Non-residents	All holders	
			Financial corporations							General government	Households and non-profit institutions serving households	Memo item: public sector			
			Non-financial corporations	Central bank	Other money-issuing corporations	Non-MMF investment funds	Securitisation corporations	Insurance corporations	Pension funds						Other financial corporations
Residents	Position at end of previous period														
	Net acquisitions during the latest period														
	Revaluations during the latest period														
	Other changes in the volume of assets in the latest period														
	Position at end of the latest period														
Non-residents	Position at end of previous period														
	Net acquisitions during the latest period														
	Revaluations during the latest period														
	Other changes in the volume of assets in the latest period														
	Position at end of the latest period														
All issuers	Position at end of previous period														
	Net acquisitions during the latest period														
	Revaluations during the latest period														
	Other changes in the volume of assets in the latest period														
	Position at end of the latest period														

Table 6.6

Debt securities holdings in a from-whom-to-whom framework by residency and resident sector of holder, by currency, maturity and interest rate, and by residency and resident sector of issuer

Holder by residency and resident sector		Residents				Non-residents	All holders		
		Non-financial corporations	Financial corporations and sub-sectors	General government	Households and non-profit institutions serving households				
Issuer by residency and resident sector and by currency, maturity and interest rate	Residents	Non-financial corporations	Currency						
			Maturity						
			Interest rate						
	Financial corporations and sub-sectors	General government	Households and non-profit institutions serving households ¹	Currency					
				Maturity					
				Interest rate					
	Non-residents	All issuers	Currency						
			Maturity						
			Interest rate						

¹Households and non-profit institutions serving households may be legally entitled to issue debt securities. In the case of households, debt securities can be issued to finance dwelling purchases.

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 rates.

Debt securities holdings in a from-whom-to-whom framework classified by holder and issuer: positions and flows

6.17 Table 6.10 shows the position and flow relationship for debt securities held by resident sectors and by non-residents vis-à-vis resident sectors and non-residents 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).

6.18 Like positions and transactions, revaluations (holding gains or losses) and other changes in volume may be presented in a three-dimensional table with breakdowns

Table 6.7

Debt securities holdings in a from-whom-to-whom framework by residency, resident sector and currency

Issuer by residency and resident sector and by currency		Holder by residency and resident sector	Residents				Non-residents	All holders
			Non-financial corporations	Financial corporations and sub-sectors	General government	Households and non-profit institutions serving households		
Residents	Non-financial corporations	Domestic currency						
		Foreign currencies						
		All currencies						
	Financial corporations and sub-sectors	Domestic currency						
		Foreign currencies						
		All currencies						
	General government	Domestic currency						
		Foreign currencies						
		All currencies						
	Households and non-profit institutions serving households ¹	Domestic currency						
		Foreign currencies						
		All currencies						
Non-residents		Domestic currency						
		Foreign currencies						
		All currencies						
All issuers		Domestic currency						
		Foreign currencies						
		All currencies						

¹Households and non-profit institutions serving households may be legally entitled to issue debt securities. In the case of households, debt securities can be issued to finance dwelling purchases.

by residency and resident institutional sector of holder and issuer. Such detailed statistical information could be provided in the future by security-by-security databases.

Debt securities holdings in a from-whom-to-whom framework classified by resident financial corporation sub-sector as holder, by residency and resident sector as issuer and by original maturity

6.19 Presentations using three-dimensional tables may be designed for sub-sectors 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 and pension funds, and other financial corporations are likely to be of great interest. Such expanded presentations may also reveal a growing (or shrinking) role for other types of financial intermediaries and financial institutions, and shed light on the nature of their business in terms of the counterparties with whom they transact as

Table 6.8

Debt securities holdings in a from-whom-to-whom framework by residency, resident sector and maturity

Issuer by residency and resident sector and by maturity		Holder by residency and resident sector	Residents				Non-residents	All holders
			Non-financial corporations	Financial corporations and sub-sectors	General government	Households and non-profit institutions serving households		
Residents	Non-financial 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 one year</i>						
		All maturities						
	Financial corporations and sub-sectors	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 one 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 one year</i>						
		All maturities						
	Households and non-profit institutions serving households 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 one year</i>						
		All maturities						
Non-residents	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 one 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 one year</i>							
	All maturities							

¹Households and non-profit institutions serving households may be legally entitled to issue debt securities. In the case of households, debt securities can be issued to finance dwelling purchases.

Table 6.9

Debt securities holdings in a from-whom-to-whom framework by residency, resident sector and interest rate

Holder by residency and resident sector			Residents				Non-residents	All holders
			Non-financial corporations	Financial corporations and sub-sectors	General government	Households and non-profit institutions serving households		
Issuer by residency and resident sector and by interest rate								
Residents	Non-financial corporations	1. Fixed interest rate						
		2. Variable interest rate						
		3. All interest rates						
	Financial corporations and sub-sectors	1. Fixed interest rate						
		2. Variable interest rate						
		3. All interest rates						
	General government	1. Fixed interest rate						
		2. Variable interest rate						
		3. All interest rates						
	Households and non-profit institutions serving households ¹	1. Fixed interest rate						
		2. Variable interest rate						
		3. All interest rates						
Non-residents		1. Fixed interest rate						
		2. Variable interest rate						
		3. All interest rates						
All issuers		1. Fixed interest rate						
		2. Variable interest rate						
		3. All interest rates						

¹Households and non-profit institutions serving households may be legally entitled to issue debt securities. In the case of households, debt securities can be issued to finance dwelling purchases.

well as the types of debt securities they hold or deal in.

6.20 Table 6.11 presents a sector/sub-sector 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 five

main sub-sectors of the financial corporation sector. The holdings are broken down by (original) maturity and within each maturity category by residency 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 data by currency and type of interest rate.

Table 6.10

Debt securities holdings in a from-whom-to-whom framework: positions and flows

Issuer by residency and resident sector and by positions, net acquisitions, revaluations and other changes in the volume of assets		Holder by residency and resident sector	Residents				Non-residents	All holders
			Non-financial corporations	Financial corporations and sub-sectors	General government	Households and non-profit institutions serving households		
Residents	Non-financial corporations	Position at end of previous period						
		Net acquisitions during the latest period						
		Revaluations during the latest period						
		Other changes in the volume of assets in the latest period						
		Position at end of the latest period						
	Financial corporations	Position at end of previous period						
		Net acquisitions during the latest period						
		Revaluations during the latest period						
		Other changes in the volume of assets in the latest period						
		Position at end of the latest period						
	General government	Position at end of previous period						
		Net acquisitions during the latest period						
		Revaluations during the latest period						
		Other changes in the volume of assets in the latest period						
		Position at end of the latest period						
	Households and non- profit institutions serving households ¹	Position at end of previous period						
		Net acquisitions during the latest period						
		Revaluations during the latest period						
		Other changes in the volume of assets in the latest period						
		Position at end of the latest period						
Non-residents		Position at end of previous period						
		Net acquisitions during the latest period						
		Revaluations during the latest period						
		Other changes in the volume of assets in the latest period						
		Position at end of the latest period						
All issuers		Position at end of previous period						
		Net acquisitions during the latest period						
		Revaluations during the latest period						
		Other changes in the volume of assets in the latest period						
		Position at end of the latest period						

¹Households and non-profit institutions serving households may be legally entitled to issue debt securities. In the case of households, debt securities can be issued to finance dwelling purchases.

Table 6.11

Debt securities holdings of resident financial corporations sub-sectors in a from-whom-to-whom framework, by residency and resident sector of issuer and by original maturity

Original maturity and issuer	Holder by resident financial corporation sub-sector	Central bank	Other money-issuing corporations	Non-MMF investment funds	Insurance corporations and pension funds	Other financial corporations
<p>Debt securities</p> <p>Short-term</p> <p>Residents</p> <p>Non-financial corporations</p> <p>Financial corporations</p> <p>General government</p> <p>Households and non-profit institutions serving households</p> <p>Non-residents</p> <p>Long-term</p> <p>Residents</p> <p>Non-financial corporations</p> <p>Financial corporations</p> <p>General government</p> <p>Households and non-profit institutions serving households</p> <p>Non-residents</p> <p><i>Memo: Long-term at original maturity, with a remaining maturity up to and including one year</i></p> <p>Residents</p> <p>Non-financial corporations</p> <p>Financial corporations</p> <p>General government</p> <p>Households and non-profit institutions serving households</p> <p>Non-residents</p>						

¹Other money-issuing corporations cover deposit-taking corporations and money market funds.

6.21 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 corporation sub-sector (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 non-financial groups consolidated on a group-basis.

Table 6.12

Debt securities holdings by country, residency, resident sector, currency, maturity and interest rate

Debt securities held by residency, resident sector, currency, maturity and interest rate	Resident holders												Non-resident holders			All holders		
	Non-financial corporations			Financial corporations			General government			Households and non-profit institutions serving households								
	Currency	Maturity	Interest rate	Currency	Maturity	Interest rate	Currency	Maturity	Interest rate	Currency	Maturity	Interest rate	Currency	Maturity	Interest rate			
Issuer resident in country																		
Country A																		
Country B																		
Country C																		
...																		
Country Z																		
All issuers (world)																		

Presentation tables with global aggregates for debt securities

6.22 Global aggregates covering debt securities are urgently required in view of the recent financial crisis and its spread through economies and markets.

6.23 The BIS, the IMF, the OECD, the World Bank, the United Nations and, at European level, Eurostat and the ECB, have experience in presenting area aggregates and some global aggregates. The methodology for presenting such aggregates is established and well documented.

6.24 This sub-section 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 organisations.

Global aggregates for debt securities holdings by country, issuing sector, market, currency, maturity and interest rate

6.25 Table 6.12 shows global debt securities holdings according to six classifications: by country (or by group of countries), residency, resident sector, currency, maturity and interest rate. The table includes the holdings of residents, which are not covered by the CPIS.

6.26 Holding sectors are non-financial corporations, financial corporations, general government and households including non-profit institutions serving households. These are broken down by currency, maturity and interest rate.

Table 6.13

Debt securities holdings and issues by country

Issuer resident in country	Holder resident in country						All holders (world)
	Country A	Country B	Country C	...	Country Z		
Country A							
Country B							
Country C							
...							
Country Z							
All issuers (world)							

Table 6.14

Debt securities holdings in major currencies

Currencies	Currencies				
	U.S. dollar	Euro	Japanese yen	Pound sterling	Other currencies
Holdings of residents	Holdings by currency denomination				
United States					
Euro area					
Japan					
United Kingdom					
Other countries					
All holdings (world)					

**Debt securities holdings and issues
by country**

6.27 Table 6.13 is a from-whom-to-whom table for debt securities holdings and debt securities issues with a breakdown of holders and issuers by country and also by aggregated groups of countries.

6.28 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.

6.29 Other breakdowns may show holdings of financial corporations or deposit-taking corporations of debt securities that represent claims on specific groups of countries, e.g. emerging and developing countries.

**Debt securities holdings by currency
denomination**

6.30 Debt securities holdings may also be presented with a breakdown by major currency, as shown in Table 6.14. The currencies are the US dollar, euro, Japanese yen, pound sterling and all other currencies.

Annex 1 The Coordinated Portfolio Investment Survey

A1.1 The Coordinated Portfolio Investment Survey (CPIS) is conducted on an annual basis under the auspices of the IMF's Statistics Department (STA). Participation in the CPIS is voluntary and some 75 economies currently participate in the survey.²³ Annual data are available from 2001.

A1.2 The CPIS provides information on individual economy year-end holdings of portfolio investment securities (equity securities and debt securities) valued at market prices, cross-classified by the country of the issuer of the securities. Participants follow definitions and classifications set out in the *Balance of Payments Manual*.

A1.3 Whereas holdings of securities recorded as direct investment are excluded from the results of the CPIS,²⁴ holdings of reserve assets are collected by STA from economies participating in the CPIS (through the Survey of Securities Held as Foreign Exchange Reserves (SEFER)). In addition, information on the security holdings of

major international organisations is also reported to STA (through the Survey of Securities Held by International Organisations (SSIO)). Neither the data on reserve assets nor those by international organisations are disclosed on a basis under which individual holders can be identified, as the information is confidential.

A1.4 Together, the three surveys (CPIS, SEFER and SSIO) provide a database on the stock of cross-border holdings of securities, broken down by the economy of residence of the issuer of the securities and cross-classified by type of security.

A1.5 In addition to the “core” data on the counterpart jurisdiction of the issuer, participants are encouraged to provide supplementary information on the currency of the underlying instruments and the sector of the holder. Currently, no data are reported on the sector of the issuer.

A1.6 The core elements of the CPIS permit a time series analysis of the CPIS survey results from two perspectives. First, they permit an analysis of reporting countries' holdings of portfolio investment securities, which highlights changes in the geographic distribution of their investments. Second, the CPIS permits the derivation, from creditor information, of time series data on portfolio investment liabilities of the countries that issued the securities. This latter time series may be taken to represent a lower bound, as participation in the CPIS is not complete

²³The number of participants has grown since its inception; 39 jurisdictions participated in 1997.

²⁴These holdings are covered in the upcoming Coordinated Direct Investment Survey (CDIS), also conducted under the auspices of the IMF's STA. The CDIS is conducted annually, with a year-end reference date, coinciding with the CPIS. The initial CDIS was conducted as of end-2009.

(some jurisdictions do not participate and, of those that do, some do not cover all residents' holdings).

A.1.7 The overall structure of the CPIS (a) provides, at an aggregate level, both assets and liabilities (derived from the creditor

data), with a breakdown by financial instrument, which is in turn broken down either by currency of denomination or by holding and issuing country; and (b) gives, at a holding country level, the holding sector broken down by issuing country.

Table A.1.1

Main structure of the Coordinated Portfolio Investment Survey

Breakdown by (1) currency of denomination or (2) holder and issuer country	Equities	Debt securities	Of which		Total
			Long-term debt securities	Short-term debt securities	

Investment in (bilateral data)	Total assets	Sector of Holder:									
		Monetary authorities	Banks	Other financial institutions	Of which			General government	Non-financial sector	Of which	
					Insurance corporations	Non-MMF investment funds	Other			Non-financial corporations	Households

Annex 2 Security-by-security databases and security-by-security collection of holder information

A2.1 As outlined in Annex 4 of the Part 1 of the *Handbook*, a security-by-security (SBS) database is a micro database that stores statistics at an individual debt security level. The main attributes of statistics stored in SBS databases are the international securities identification number (ISIN) (or the identification number according to some other scheme, since SBS databases cannot store securities without codes), name of the issuer, residence of the issuer, sector and sub-sector, issue date, redemption date, type of security, currency of denomination, issue price, redemption price, outstanding amount or market capitalisation, and the coupon payments and dates (see Diagram A4.1 of the Part 1 of the *Handbook*).

A2.2 SBS databases can be linked to securities holdings statistics for resident holders grouped by sector and sub-sector, as well as for non-resident 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 debt securities holders and holdings: (i) the holder by residency and institutional sector and sub-sector and also by large and complex financial or non-financial group; and (ii) the amount of holdings in currency.

A2.3 At least two levels of access should be distinguished, i.e. access to raw data for

statisticians and access to more aggregated data for users, for instance to compile flow-of-funds and sectoral financial balance sheets.

A2.4 Current reporting schemes on debt securities holdings are mainly based on two groups of agents having access to information on securities holdings: (a) custodians (as well as centralised securities depositories); and (b) direct reporters. In most cases, data are collected from custodians on an SBS basis. This also refers to the collection of data on the debt securities holdings of residents from non-resident custodians to allow the breakdown of holdings by the residency of the issuer to be estimated.

A2.5 Direct reporters provide SBS data on their holdings with various breakdowns: by type of instrument, maturity, residence of issuer, etc. There may be also a legal obligation in countries for residents to report their securities held in custody abroad. However, there is usually a limited coverage of data directly collected from specific sectors or sub-sectors, like households and non-profit institutions serving households.

A2.6 When deciding whether to construct an SBS database linked to securities holdings statistics, the full range of benefits and costs needs to be considered.

Annex 3

Groups of corporations as holders of debt securities

A.3.1 In addition to the unconsolidated presentation of debt securities holdings described in this *Handbook*, the consolidation at corporate group level entails valuable information from a financial stability perspective.

A.3.2 Large groups of financial or non-financial corporations or conglomerates exist whereby a parent corporation controls several subsidiaries, some of which may control subsidiaries of their own, and so on. Therefore, the concept of a group of corporations (2008 SNA 4.51) deviates from the grouping or aggregating of institutional units to an institutional sector as it groups institutional units based on the concept of control (2008 SNA 4.69-4.71).

A.3.3 Under the corporate group consolidated presentation, debt securities holdings of a group of corporations are presented in consolidated form at the group level. This means that all intra-group positions and flows are eliminated, which,

given the dimension and complexity of groups, are likely to be significant. Conversely, links between affiliates and branches abroad and third parties, or affiliates in other sectors are contained in the consolidated presentation. By aggregating all risks and exposures of the corporations in the group on a consolidated basis, this dataset reflects the risks and exposures of major institutions in the financial system.

A.3.4 For financial stability purposes, it is therefore crucial to have information on debt securities holdings consolidated at the level of groups of corporations, with a breakdown by issuer (e.g. on a sector and residency or ultimate risk basis), currency, maturity and type of interest rate. This information allows for a differently focused analysis of the securities holdings statistics. The stability of the financial system can only be assessed by analysing the broad financial interlinks information given by the group consolidated data.

Glossary

Acquisition: purchase of newly issued securities from a debtor or of existing securities on the secondary market from the previous holder. Gross acquisitions are considered to have occurred when claims and obligations arise, usually in exchange for currency or transferable deposits. Gross acquisitions also include accrued interest receivable, as if the accruing interest were paid out and promptly reinvested in the debt securities by the holder. Net acquisitions are derived as gross acquisitions less disposals.

Aggregation: the summing of gross position or flow statistics; 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* 3.110).

Asset-backed commercial paper (ABCP): commercial paper, created through securitisation, 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 securitisation, 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. (*External Debt Guide* Appendix I and *MFS Guide* 4.19).

Asset price-linked: a debt security linked to non-financial asset prices and indices, such as the gold price or a commodities price index, financial asset prices and indices, such as a specific share price or share price index and other asset prices, such as property prices.

Bonds and notes: debt securities with an original maturity of more than one year that are negotiable and usually traded in organised and other financial markets; they usually give the holder the unconditional right to fixed money income or contractually determined variable money income (*External Debt Guide* Appendix I).

Consolidation: the elimination of positions or flows between institutional units that are grouped together for statistical purposes (*2008 SNA* 2.68). Institutional units can be consolidated at a sub-sector, sector or national economy level or at a (corporate) group level.

Coordinated Portfolio Investment Survey (CPIS): conducted on an annual basis under the auspices of the IMF's Statistics Department (STA). Participation in the CPIS is voluntary and some 75 economies currently participate in the survey. Annual data are available from 2001. The CPIS provides information on individual economy year-end holdings of portfolio investment securities (equity securities and debt securities) valued at market prices, cross-classified by the country of the issuer of the securities. Participants follow definitions and classifications set out in the *Balance of Payments Manual*.

Coupon payments: part or whole of the interest accrual during a period and payments that reduce the initial principal (*BPM6* 11.49).

Debt security: a negotiable financial instrument serving as evidence of a debt (2008 SNA 11.64).

Debt securities holdings: ownership of debt securities (financial assets) by an institutional unit (2008 SNA 3.4).

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: captures a transaction between two institutional units in the accounts of the two transactors, and also permits the change in creditor to be recorded in the financial account of the debtor (or, in the case of, for example, the assumption of a debt, the change in debtor to be recorded in the financial account of the creditor).

Depository receipt: a financial instrument that allows a non-resident to introduce securities into another 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 Guide* Appendix I).

Dirty and clean price: the price of a debt security refers to the clean price. 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 to the clean price.

Disposal: refers to a sale of securities to the debtor, on maturity or upon redemption at an earlier date or of securities on the secondary market to a new holder. A disposal is considered to have occurred when an obligation has disappeared due to redemption or due to a sale on the secondary

market, usually in exchange for currency or transferable deposits.

Domestic currency: the currency that 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 (*BPM6* 3.95).

Domestic currency-denominated: debt securities whose principal and coupon are both settled in domestic currency.

Financial corporations sector: the sector consisting of all resident corporations that are principally engaged in providing financial services, including insurance and pension funding services, to other institutional units (2008 SNA 4.98).

Fixed interest rate debt security: a debt security whose coupon remains unchanged for the life of the security or for a certain number of years (see also variable interest rate debt security) (*External Debt Guide* Appendix I).

Flow: economic actions and effects within an accounting period (*BPM6* 3.2).

Foreign currencies: all currencies other than the domestic currency (*BPM6* 3.95).

Foreign currency-denominated: debt securities whose principal or coupon (or both) are settled in foreign currencies.

From-whom-to-whom framework: presents debt securities holdings by debtor/creditor. It is identical to the flow of funds presentation (2008 SNA Chapter 17).

General government sector: the 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 4.117).

Global aggregates: refer to debt securities aggregates for the world as a whole and for different areas and countries.

Group of corporations: covers a parent corporation which controls several subsidiaries, some of which may control subsidiaries of their own, and so on.

Households sector: the sector consisting of groups of persons who share the same living accommodation, pool some or all of their income and wealth and consume certain types of goods and services collectively, mainly housing and food; they also cover unincorporated enterprises (*2008 SNA* 4.149).

Inflation-linked: a debt security whose principal amount or coupon (or both) is indexed to inflation, such as the 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: important holders of debt securities covering investment funds (money market funds (MMF) and non-MMF), insurance corporations and pension funds (*Institutional investors' assets*, OECD).

Interest payments: periodic payments of the interest costs that the borrower incurs and that primarily take the form of coupons.

Interest rate-linked: a debt security linked to a specific interest rate or interest rate index.

Long-term maturity: a maturity of more than one year, or with no stated maturity (*BPM6* 5.103).

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* 3.122) but including accrued interest.

Negotiable: refers to the fact that legal ownership is readily capable of being transferred from one owner to another by delivery or endorsement (*BPM6* 5.15).

Nominal value: the sum of funds originally advanced, plus any subsequent advances, less any repayments, plus any accrued interest.

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 beneficial owner, not the nominee.

Non-financial corporations sector: the sector consisting of corporations whose principal activity is the production of market goods or non-financial services (*2008 SNA* 4.94).

Non-profit institution serving households (NPISH) sector: the sector consisting of legal entities that are principally engaged in the production of non-market services for households or the community at large and whose main resources are voluntary contributions (*2008 SNA* 2.17 (e)).

Original owner: an institutional unit that is an originator or purchases assets from an originator in the secondary market.

Original maturity: the period from the date of issue of a debt security until the final contractually scheduled payment (*BPM6* 5.104 (a)).

Other change in the volume of assets: a change in the quantity or physical characteristics of debt securities, or changes in classification.

Other financial corporations: the financial corporations sector excluding the central bank, other money-issuing corporations and securitisation corporations.

Other money-issuing corporations: deposit-taking corporations and money market funds that issue liabilities that are included in the national definition of broad money.

Position: the level (or value) of assets or liabilities at a point in time (*BPM6* 3.2).

Principal (original): the amount borrowed and to be repaid excluding interest due or accrued (*MFS Guide* 2.46).

Principal (outstanding): the original principal, less non-interest payments the

debtor has made to reduce the original principal (*MFS Guide* 2.46).

Public sector: the sector comprising general government, public non-financial corporations and public financial corporations, including the central bank.

Redemption value: the amount paid to discharge the debtor's obligation at maturity; also referred to as face value (*MFS Guide* 2.49).

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* 5.104 (b)).

Repurchase agreement: an arrangement involving the provision of debt 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* 5.52).

Residence: the residence of each institutional unit is the economic territory with which it has the strongest connection, in other words, its centre of predominant economic interest (*2008 SNA* 4.10).

Residence of holder: a presentation based on a breakdown of the holders of debt securities by residence.

Residence of issuer: a presentation based on a breakdown of the issuers of debt securities by residence.

Revaluation: reflects changes in prices of debt securities holdings. It also includes changes in prices of debt securities holdings in foreign currency due to exchange rate changes.

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, may require the securities borrower to provide assets as collateral in the form of cash or securities. Legal titles pass 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.

Securitisation corporation: a financial corporation that specialises in issuing securitisation debt securities (*BPM6* 4.77 (a)).

Security: a negotiable financial instrument (*BPM6* 5.15).

Security-by-security (SBS) database: a micro database that stores statistics at an individual debt security level.

Stripped securities (separate trading of registered interest and principal of securities or 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 (*External Debt Guide* Appendix I).

Short-selling: 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-term maturity: a maturity on demand or in one year or less).

Transactor principle: captures the change in ownership of a financial asset (or the change of debtors in the case of the assumption of a debt) in the accounts of the transactors involved, but not in the account of the debtor (or of the creditor where one institutional unit takes on the liability of another).

Variable interest rate debt security: a debt security with a coupon linked with a fixed spread to a reference index, such as an inter-bank interest rate, a price of a specific commodity, or a price of a specific financial

instrument, which normally changes continuously in response to market conditions (*BPM6* 5.110).

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 (*External Debt Guide* Appendix I).

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