



# 13

## Debt Securities

### Introduction

**13.1** External debt in the form of debt securities are liabilities within direct and portfolio investment of the balance of payments and the International investment position (IIP). In recent decades, the relaxation of restrictions on the foreign investment activities of financial corporations and other institutional investors, combined with continued financial innovation, has resulted in a surge of cross-border investment in debt securities (and equities). This has increased the interest of policymakers in data on this activity.

**13.2** However, ensuring comprehensive coverage of debt securities is among the most difficult in the field of balance of payments, IIP, and external debt statistics. In particular, the resident issuer is, in many cases, not in a position to identify the owner of their debt securities, and so may be unaware of whether the creditor is a resident or nonresident. Thus, almost inevitably, to compile position data, other than by accumulating flows on a previous position, the compiler needs to obtain information on the stock of debt securities of residents, and the owners of those securities, from a variety of sources. While it is relatively straightforward, but not a simple task, to obtain data on non-traded debt liabilities, for the following reasons, it is more difficult to identify the owner of a debt security.

- Liberalization has facilitated the development of new channels through which investment can flow. In other words, compilers can no longer rely solely on traditional domestic data sources, such as banks, other financial corporations, or security dealers, because investors increasingly use foreign intermediaries, and security issuers may access foreign markets directly.
- Unlike banks, which have a tradition of reporting to the central banks and/or other regulatory agencies, as noted in the previous chapter, non-bank corporations may be reluctant to report to

the authorities on their ownership of debt securities, because, amongst others, of concern that data sent to the statistical agency may be passed on to other agencies. This, once again, highlights the need for the promotion of statistical integrity within the country.<sup>1</sup> Noncompliance by respondents leads to gaps in coverage at a time when activity is rising.

- The participation of various financial intermediaries in international transactions and the practice of registering of investment under nominee companies and in trusts can obscure the owner of the security (the entity to which the security is registered may not necessarily be the security owner; the latter being the relevant party for identifying residency of the creditor).
- International markets in certain instruments have grown quickly in the past decade, causing difficulty in determining the “true” owner of the security. An example is the use of securities in reverse security transactions.
- Rarely, if at all, is it possible for a government to have legal powers to require a nonresident investor to report on their ownership of securities issued by domestic residents.

**13.3** Ways in which these difficulties might be overcome are examined in this chapter.<sup>2</sup>

<sup>1</sup>Integrity of disseminated data is one of the four dimensions of the International Monetary Fund (IMF)’s Special Data Dissemination Standard (SDDS) and General Data Dissemination System (GDDS). Among the types of actions that the SDDS and GDDS outline to promote integrity is the dissemination of the terms and conditions under which official statistics are produced, including those relating to the confidentiality of individually identifiable information.

<sup>2</sup>Although a practical guide for the measurement of assets, a helpful source of information on compiling position data for debt securities is the IMF *Coordinated Portfolio Investment Survey Guide*, second edition (IMF, 2002), which is available on the IMF Website [www.imf.org/external/np/sta/pi/cpisgd.htm](http://www.imf.org/external/np/sta/pi/cpisgd.htm).

## General Observations

**13.4** In looking at ways to capture activity in securities for external debt purposes, countries should take into account any existing system they already have in place for the collection of data on portfolio investment and, more generally, for balance of payments and IIP data, and also arguably, national accounts data. Respondents will know the existing system, and a considerable amount of human capital will have been invested in it at the compiling agency. Those concerned with external debt statistics should draw on this knowledge and expertise, not least because a detailed system of collecting data on inward and outward security investment can be resource intensive.

**13.5** Also, there is a close linkage between cross-border securities activity and other data series such as direct investment.<sup>3</sup> More important, inward and outward portfolio investments are directly affected by both domestic and cross-border activity. Whereas direct investment generally involves the establishment of a longer-term relationship between parent companies and their foreign affiliates, securities investment involves securities—both domestic and foreign—that potentially can be traded between residents and nonresidents. Depending on regulations and institutional arrangements, ownership of domestic and foreign securities can change quickly. Indeed, as exchange controls are lifted, inward and outward capital flows can arise from security transactions of both residents and nonresidents. So, while the focus in the *Guide* is on foreign investment in debt securities issued by residents, when considering how to measure this activity, due regard should be given to the measurement of residents' investment in debt securities—issued by both residents and nonresidents.

**13.6** The close relationship between data on debt securities in external debt, the balance of payments, IIP, and the national accounts means that it is important for agencies to cooperate. Otherwise potentially useful information may not be utilized, while at worst, respondents could end up reporting essentially the same information to two different statistical agencies. Cooperation need not only involve statistical agencies. In other government agencies, there will be potential

users of the data collected. For instance, information on nonresident ownership of government debt securities is likely to be of interest to finance ministries in helping to formulate government debt policy. Policy ministries can help the compiler in devising report forms, encouraging responses, and evaluating the (aggregate) data.

**13.7** Finally, any development of the data system to capture investment in domestic debt securities by nonresidents will inevitably lead to questions about the computer system on which data are to be stored and manipulated. Computer systems are obviously tools that help facilitate a more efficient statistical operation, but before a computer system is installed, it is necessary to consider the form of the data capture and manipulation; the data output required both in final form and from interrogation of the system; as well as any need to be compatible with data stored in other systems.

## Key Considerations

**13.8** An important starting point in deciding how to measure positions (and flows) in debt securities is ascertaining how and through which channels debt security investment flows into and out of the country. This involves talking to market participants and generally gaining an understanding of the domestic debt security markets. The issues to explore are:

- How do nonresidents invest in domestic debt securities?
- Through which institutions do they invest?
- Where do nonresidents arrange for the custody of their domestic debt securities? How are records held?
- Where are trades settled?
- Are security codes used in monitoring debt security positions?
- Do residents issue debt securities directly abroad? Do residents invest in these debt securities?

**13.9** Key characteristics of debt securities are identified in Box 13.1.

**13.10** The importance of preliminary research cannot be overstated because, once completed, the compiler can decide at which point or points in the “chain” of activity it is most appropriate to collect information.

<sup>3</sup>Direct investment intercompany lending may include debt securities (see paragraphs 3.16 and 3.17).

### Box 13.1 Main Features of Debt Securities

Debt securities should display all, or most, of the following quantitative characteristics:

- An issue date, on which the debt security is issued
- An issue price, at which investors buy the debt securities when first issued
- A redemption (or maturity) date, on which the final contractually scheduled repayment of the principal is due<sup>1</sup>
- A redemption price or face value,<sup>2</sup> which is the amount to be paid by the issuer to the holder at maturity
- An original maturity, which is the period from the issue date until the final contractually scheduled payment
- A remaining (or residual) maturity, which is the period from the reference date until the final contractually scheduled payment
- The coupon rate that the issuer pays to the holders, which may be fixed throughout the life of the debt security or vary with inflation, interest rates, or asset prices<sup>3</sup>
- The coupon dates, on which the issuer pays the coupon to the securities' holders
- The issue price, redemption price, and coupon rate may be denominated (or settled) in either domestic currency or foreign currencies

Qualitative characteristics of debt securities include:

- The documents specifying the rights of debt securities issuers, in the form of indentures or covenants. The terms of contracts may be changed only with great difficulty, with amendments to the governing document generally requiring approval by a majority vote of the debt securities' holders
- The default risk attached to debt securities, which is the creditworthiness of individual debt securities issues often assessed by credit rating agencies<sup>4</sup>

<sup>1</sup>The maturity date may coincide with the conversion of a debt security into an equity security, either that of the issuer or a corporation other than the issuer. The redemption (or maturity) date may change due to early redemption or prolongation of the security.

<sup>2</sup>The face value of a debt security is defined as the amount of principal to be repaid (2008 SNA 3.154 (d)).

<sup>3</sup>Some debt securities have no coupon payments during their life, with the full return being paid at maturity (zero-coupon bonds).

<sup>4</sup>For further details, see Section 6 in the *Handbook on Securities Statistics, Part 1: Debt Securities Issues*.

There is no one obvious answer for all compilers. For legal, institutional, and historical reasons, different countries have different market structures and practices, and so what suits one country may not suit another. Nonetheless, the pros and cons of collecting information from different types of market participants (e.g., security issuer, registrar, and custodian) can be indicated, and these are set out in Table 13.1. The relevance of the various advantages and disadvantages will depend on individual economy circumstances. For different instruments and markets, different collection methods may be appropriate.

**13.11** Before discussing the advantages and disadvantages of approaching different types of respondents, the relationship between the collection of transactions and position data needs to be considered. There are various ways transactions and position data can interact:

- Transactions data can be compiled separately from position data, and cross-checks introduced to validate both sets of data.<sup>4</sup>
- Transactions data can be added to a previous position and, with appropriate revaluations and any other adjustments, a new estimated position calculated (although an independent benchmark position survey at periodic intervals is essential to check and improve the quality of the estimated position data)—see the appendix to Chapter 12 on estimating position data with transactions information.
- Position and transactions data can be collected in an integrated way, by requesting respondents

<sup>4</sup>See Appendix: Estimating Position Data with Transactions Information in Chapter 12 for more information in this regard. See also the *BPM6 Compilation Guide* for an explanation of how to reconcile position and transactions data, and to estimate income from position data.

Potential Respondent	Advantages	Disadvantages
<b>Issuer of Security</b>	Will know about securities issued.	Unlikely to know beneficial owner of the security either at issue or during secondary market trading.
<b>Financial Intermediary</b>		
<i>Banks</i> (receipts/payments)	Transactions in domestic currency require settlement through resident banks. Transactions recorded could be cumulated on a previous position and, with appropriate valuation adjustments, provide new position data.	Nature of transaction may be difficult to establish. May have a problem in identifying direct investment transactions. While a method for compiling position data in the short term, a more direct measure of the stock position might be required in the medium term, depending on the complexity of the reporting system. Also, only covers investment in securities issued in the domestic market.
<i>Issuing Agency</i> (Security House/ Bank)	Will know about securities issued.	May not know beneficial owners at issue and, unless a dealer, will not know about secondary trading.
<i>Dealer</i> (Security House/Bank)	Will have information on sales and purchases of securities. As with banks, transactions data could be used to compile position data.	May not cover all nonresident purchases of resident securities. May have a problem with nominees and identifying direct investment transactions.
<i>Fund Manager</i>	Will have information on beneficial owners.	Unlikely to cover all nonresident purchases and holdings of resident securities.
<b>Organized Exchange</b>	Will have a record of transactions on the exchange and perhaps positions. Data on positions might also be available via member firms.	May not cover all nonresident purchases and holdings of resident securities. May have a problem with nominee accounts.
<b>Settlement Agency</b>	Will have a record of transactions.	May not cover all nonresident purchases and holdings of resident securities. May have a problem with nominee accounts and identifying direct investment transactions/positions. Records may not be kept in a form appropriate for external debt/balance of payments purposes.
<b>Registrar</b>	Will know who owns which securities.	Use of bearer securities undermines the use of a securities register. May have a problem with nominee accounts. May not cover transactions particularly well.
<b>Custodian</b>	Information on ownership available. Fewer in number than investors. Should know information on the outstanding value of holdings.	Coverage of nonresident purchases and holdings of resident securities is uncertain. May have a problem in identifying nonresidents, although tax status may help, and direct investment transactions. May not know exact details of transactions/may have difficulty extracting data in line with balance of payments methodology. Double counting a potential problem if subcustodians used.

to reconcile transactions, other flows, and positions. The compilation can be carried out on an aggregated basis (with possible breakdowns by counterpart country, counterpart sector, and currency of denomination) or on a security-by-security basis,<sup>5</sup> supported by a database with information on individual securities issued by

domestic residents (Box 13.2). Individual transactions data could also be used to update the individual holdings of securities (although even then periodic verification of the derived position data is recommended using alternative or additional inquiries).

**13.12** Whichever method is used, decisions on whom to approach and what to request in terms of position data are at least influenced by the approach taken to collecting transactions data. So, in the discussion below, both transactions and positions data are discussed.

<sup>5</sup>For additional information about security-by-security databases, see the *Handbook on Securities Statistics Part 1 (2009): Debt Securities Issues*, Annex 4, and the *Handbook on Securities Statistics Part 2 (2010): Debt Securities Holdings*, Annex 2.

### Box 13.2 Security-by-Security Databases

In measuring positions in debt securities, information may be collected from respondents at the level of the individual instrument (security-by-security). Such an approach potentially provides great flexibility in meeting requirements for external debt statistics. However, to utilize fully the potential of such information, the compiler is advised to develop or acquire a database that contains detailed information on individual securities—price, country of issuer, industrial sector of issuer, income, etc.—and that uniquely identifies securities through a security identification code, e.g., the International Security Identification Number (ISIN).<sup>1</sup> Through such a database, individual securities that are reported with an identification code can be located in the database, and the associated information can be drawn upon to compile information not only on outstanding positions but, depending on the scope of the associated information contained, statistics on the debt-service payments schedule, the currency composition of external debt, etc. Also, such an approach can enhance data quality by allowing the compiler to check the accuracy of submitted data and to resolve conflicting reports. A prominent example of a security-by-security database is the Centralized Securities Database (CSDB) set up by the European System of Central Banks.

#### Sources of Information

Information on individual securities can be obtained from commercial sources, international organizations, and security numbering agencies. By far, the most comprehensive and complete databases are those available from commercial sources, usually at a commercial price. The best of these commercial sources supply high-quality, timely, comprehensive data to the international financial community to support investment activity. Nevertheless, they may not be the most reliable source for statistical attributes, and, so statisticians will need to review closely the reporting of these attributes if relying on commercial sources. The Bank for International

<sup>1</sup> More detailed information on securities database is available in the IMF (2002), *Coordinated Portfolio Investment Survey Guide*, second edition, available at [www.imf.org/npl/sta/pi/cpisgd.htm](http://www.imf.org/npl/sta/pi/cpisgd.htm).

Settlements (BIS) maintains a database of international debt securities that is available to member central banks and perhaps other governmental organizations.<sup>2</sup> The Association of National Numbering Agencies has a database of individual securities that is commercially available. By linking the databases of national numbering agencies (NNAs)—the entities that assign the ISIN in their own jurisdiction—this database provides key descriptive information on individual securities. Coverage of individual securities differs in completeness among NNAs, and information on market prices is not included. To understand more about the information available on this database, it is recommended that the compiler approach the NNA that allocates ISIN codes to securities issued within the domestic economy.

#### Role of the Security Identification Code

As noted above, in a compilation approach that uses a database of individual securities, the security identification code is of central importance—the respondent needs to provide a code so that the database can identify the security. However, different respondents could submit different security identifiers for the same security because any widely traded security could be allocated a domestic as well as an international security identifier. For instance, in the United States, a domestic security code (known as CUSIP) will be allocated to a domestic security. As a result, private investors have adopted a variety of different security identification systems as their primary identifier. National compilers should discuss the use of security identifiers with potential survey respondents. If national compilers can rely on survey respondents to use primarily one coding system—for instance, the ISIN—this enhances the efficiency of the compilation procedure. If not, then the agency is advised to acquire a database(s) that contains all the various identifier codes that a given security has been assigned by the different coding systems. These cross-reference databases may well be available from the same commercial firms mentioned above.

<sup>2</sup> BIS data are available at [www.bis.org/statistics/index.htm](http://www.bis.org/statistics/index.htm).

## Nonresident Investment in Domestically Issued Debt Securities: Potential Respondents

**13.13** An obvious approach for compilers is to collect information on nonresident investment in debt securities issued domestically by residents from domestic financial intermediaries. This approach assumes that nonresidents will involve these intermediaries when undertaking transactions in the domestic market. For instance, for transactions and positions in government debt securities, the government might consider making such a reporting

requirement a condition of any licensing approval that the domestic financial entity may need in order to have settlement accounts in domestic government debt securities.

### Deposit-Taking Corporations

**13.14** Typically, banks are approached for data on external transactions and positions because of their role in the payments system; if domestic currency is used to settle transactions, a resident bank is likely to be involved. However, money flows through banks for a variety of reasons, and banks may have difficulty

in establishing the specific nature of a transaction as a debt securities transaction. Also, it is important that transactions involving nonresidents are captured not only when money comes into the country but also whenever nonresidents transact in domestic currency, such as when a nonresident draws down a domestic bank account to purchase a resident debt security. This is the key issue: can banks identify and report in a comprehensive manner investment by nonresidents in domestic debt securities? The possible use of data from banks in their role as custodians is examined later in the chapter.

### Issuing Agency

**13.15** Some countries collect information on domestically issued debt securities from issuing agencies. These agencies act on behalf of the issuer of securities in distributing the securities and in realizing the proceeds. They can typically provide information on key features of the issuance such as debt security issuer, issue price, currency, and maturity. Nevertheless, the beneficial owner at issue and information on secondary trading may not be available.

### Investment Dealers

**13.16** Another method used is to gather data on debt securities from investment dealers, including banks that conduct portfolio investment business on behalf of nonresidents. In other words, those who arrange and execute the deals. Dealers usually keep records of client transactions and may be better able to identify portfolio investment transactions than banks through their payments system activity. Invariably, the number of domestic investment dealers is likely to be fewer than the number of investors, and, legal circumstances permitting, should be approachable. This method of approach depends, of course, on nonresidents using domestic intermediaries (which may not be the case). Also, these institutions will need to be able to identify residents and nonresidents and keep records in a manner that allows their use in external debt, as well as balance of payments and IIP compilation.

**13.17** Countries may adopt a system of capturing foreign investment in debt securities using dealer reports. The dealers report individual transactions involving nonresidents and include the value of the deal and the unique code for the debt security (devel-

oped for settlement purposes).<sup>6</sup> Information kept on a database of individual debt securities is used to confirm the residence of the issuer of the debt security and provide additional information, e.g., Canada has successfully adopted such a detailed and complex statistical system using dealer reports, which also generates income data on an accrual basis.

### Resident Fund and Investment Managers

**13.18** Some countries carry out special surveys that are addressed to resident fund/investment managers, and request information on own account and client account investments in resident and nonresident debt securities by resident and nonresident investors, thus providing the necessary data on residents' debt liabilities to nonresidents. Data on the country and institutional sectoral distribution of ownership may also be requested. The information can provide good coverage of the household sector's portfolio assets, provided that they use resident fund managers. However, such a survey will not provide comprehensive coverage of nonresident ownership of resident securities unless nonresidents use domestic fund managers extensively.

### Stock Exchange and Settlement Agencies

**13.19** Another method is to capture nonresident investment in domestic securities at the point of the trade or settlement—for instance, using information on transactions from the stock market. At the least, the stock exchange usually has to keep a record of individual transactions, and at best may act in a settlement capacity and see the cash change hands. It may be possible for this information to be supplied to the compiling agency. Sometimes there may be a separate but similar market mechanism for bond trades. Through these markets, nonresident investment transactions and holdings may be obtained. For instance, the exchange might have or can obtain the authority to request that information be reported to it on who owns what securities. This might be undertaken not only for statistical but also for regulatory and policy purposes.

**13.20** However, there may be reluctance for the stock exchange or settlement agency to release the infor-

<sup>6</sup>While NNAs frequently issue their own code for securities issued in their jurisdiction, they also allocate a unique ISIN code for each security. More information on ISIN codes is available in IMF (2002), Appendix 7, pp. 151–153.

mation required by the compiling agency, and the prevalence of nominee accounts may lead to misidentification of the true investor (a common problem when “intermediaries” report). Other issues that could arise are whether the records kept can be readily utilized for external debt and balance of payments and IIP statistics purposes, and the comprehensiveness of the coverage of nonresident investment in resident securities.

**13.21** Close links with the stock exchange may be important for the compiler in other regards. The stock exchange will be a source of information on market developments; it may well be the agency that needs to be kept informed by quoted corporations of new securities issues—helpful for information on security issues in foreign markets by residents (and domestic security issues by nonresidents); it may be the agency allocating code numbers to individual securities issued in the domestic market; and individual investors may need to inform the stock exchange of large equity holdings, thus helping the compiler to identify direct investment positions and transactions.

### Registrars

**13.22** Another avenue is to approach registrars who store information on the owners of debt securities (e.g., to make coupon payments).<sup>7</sup> For instance, details of ownership of debt securities issued by the government in domestic markets are frequently held on a computerized book-entry register, with change of ownership being evidenced by an entry on this computerized register, rather than the transfer of a physical certificate. These registers are often maintained at a country’s Central Securities Depository (CSD). Typically, these registers contain useful information such as, for each debt security, the outstanding balance for each investor, and the amount of accrued interest. Also, debt securities can be valued both at market as well as nominal value and can be classified by original as well as remaining maturity. However, problems arise in identifying ownership, given the frequent use of nominee accounts, not least for administrative efficiency.

<sup>7</sup>For identifying nonresident holders of debt securities, compilers may find useful information from the residency of holders receiving coupon payments.

### Custodians

**13.23** Yet another method of measuring nonresident investment in debt securities issued by domestic residents is to collect data from custodians. Many countries use custodian surveys of one type or another, and an approach should be explored for compiling at least some element of the data on nonresident ownership of securities. Domestic securities owned by nonresidents may be deposited with local custodians for “safekeeping,” and these institutions, primarily deposit-taking corporations, could be approached through a survey to report transactions and ownership of domestic securities by nonresidents. Such a survey can provide good coverage of resident securities denominated in the domestic currency and traded in national organized markets.

**13.24** However, resident securities denominated in foreign currency, issued and usually traded in foreign organized markets (e.g., international bonds), are unlikely to be captured by such a survey. Also, there are other possible drawbacks that the compiler needs to consider.

**13.25** The custodian may have difficulty in distinguishing residents from nonresidents, although a possible different tax treatment from that applied to residents may be one way in which this distinction can be made.

**13.26** A local custodian may be acting on the instructions of a “global” custodian, located in another economy, and so may not know the name of the beneficial owner of the debt security—the debt security might be registered in the name of a foreign global custodian. Resident custodians are likely to record debt security holdings in the name of the global custodians as nonresident holdings, but resident investors could subsequently purchase the debt securities but leave them entrusted with the global custodian, causing a mismeasurement of nonresident ownership. Periodic surveys to confirm the beneficial owner of securities may be warranted.

**13.27** Another potential problem, and one that arises with all transactions and positions reported through financial intermediaries, is the difficulty in distinguishing debt securities related to direct investment activity from other cross-border security activity, leading to the possibility of double

counting of investment activity if direct investment data are separately collected, which is usually the case.

**13.28** Debt securities data from custodians can be reported on an individual or aggregate basis. As mentioned above, data reported on an individual basis is best supported by a database that records individual securities issued by domestic residents. The quality of the data compiled using such a database can be better assured and the possibilities of data analysis can be expanded. Also, it can reduce the burden on the respondent and confirm the data reported. Nevertheless, there can be considerable resource cost for the compiling agency.

**13.29** Alternatively, aggregate data can be requested from custodians. As always, checks are required, for instance, with aggregate data a custodian might report the number of debt securities owned rather than their value. It should also be recognized when requesting aggregate information that custodians may not hold their records of nonresident ownership of domestic securities in a way that is conducive to external debt reporting. Therefore, preliminary discussions are essential to ascertain which data might be readily available.

### Issues of Debt Securities by Residents in Foreign Markets

**13.30** Measuring foreign investment in debt securities issued abroad by residents can be difficult. Foreign intermediaries will not report to the domestic compiling agency. Swapping data with foreign compilers is one option, but this approach is difficult to implement because the compiler would need to know all the compilers to approach, and the nonresident compiler would need to have the requisite data. A more promising approach is to obtain information on gross issues and redemptions of international issues either from issuers themselves or from other sources, including the domestic stock exchange or other official bodies that should be informed of any new issues by quoted companies. International sources of information, such as the BIS international securities database,<sup>8</sup> could also prove useful.

<sup>8</sup>Other additional sources regarding debt securities databases are presented in the *Handbook on Securities Statistics Part 1 (2009): Debt Securities Issues* and *Part 2 (2010): Debt Securities Holdings*.

**13.31** If a database of individual debt securities is maintained—or aggregate information on foreign debt security issuance is reported by resident issuers—so that net new issues in foreign markets—gross issues and gross redemptions—are recorded, and the outstanding amounts of the debt securities issued by residents in foreign markets can be calculated, a reasonable assumption could be that these securities are purchased by nonresidents, excluding those known to be purchased by residents. In other words, external debt in the form of nonresident investment in debt securities issued in foreign markets by residents, including government, could be calculated by, all other things being equal, netting out domestic ownership of resident debt securities issued in foreign markets from the total outstanding. Information on resident holdings of these debt liabilities could come from domestic respondents, either the investors themselves or financial institutions involved in this activity. Besides being a method of calculating an element of external debt, the resultant information on resident and nonresident ownership of debt securities issued in foreign markets is of interest in its own right, as explained in Chapter 7.

**13.32** This approach is a perfectly acceptable compilation technique and would require the compiler to liaise with the agency that compiled data on domestic investment in domestic securities for the financial accounts. Indeed, some countries employ this technique to measure inward investment into all debt securities issued by residents (issued both in domestic and international markets).

### Information on Securities Involved in Reverse Security Transactions

**13.33** If the collateralized loan approach<sup>9</sup> is employed to record *reverse security transactions* (such as repurchase agreements, repos), memorandum Table 4.6 is provided for the presentation of data on debt securities issued by residents that residents acquire from or provide to nonresidents under these arrangements. It is expected that the majority of such transactions will occur in the domestic market, most likely in the government debt securities market. Most commonly,

<sup>9</sup>For the collateralized loan approach and *reverse security transaction* definitions, see paragraphs 3.37 and 3.38 in this *Guide*.



repos are transacted by financial institutions with other financial institutions, including central banks. Requiring domestic financial institutions to report domestic and nonresident debt securities sold to and purchased from nonresidents under reverse transactions, perhaps in their balance-sheet returns to central banks and/or statistical agencies, is likely to cover the bulk of the business. Other entities such as nonfinancial enterprises and governments may be involved in *reverse security transactions*, perhaps even in domestically issued securities in foreign markets. So the compiler is advised to investigate the significance of information from these institutional sectors as well.

**13.34** However, in compiling data on debt securities issued by residents and traded under *reverse security transactions* by residents with nonresidents, care needs to be taken to avoid double counting. Experience indicates that where debt security registers are used to identify nonresident ownership and/or where custodians report, it is not always possible to identify debt securities subject to repos. So, if a custodian provides information on nonresident ownership of resident debt securities, it may be inclusive of debt securities purchased and sold under *reverse security transactions*, i.e., the information might already include resident securities acquired by nonresidents from residents under *reverse security transactions*, contrary to the collateralized loan approach. It is very important for the compiler to understand how securities involved in *reverse security transactions* are recorded in the position information provided.

### Possible Mismeasurement

**13.35** Clearly, the more transactions in domestic securities are concentrated in the domestic economy, the greater is the likelihood that domestic financial intermediaries can provide adequate coverage and, thus, a lower likelihood that there will be undercounting. The difficulty is then in ensuring that resident and nonresident owners are correctly identified and the concepts outlined in the *Guide* are adhered to.

**13.36** On the other hand, overcounting is more likely where a number of methods are used to collect data. While more than one method may be needed to ensure comprehensive coverage—for instance, the measurement of foreign investment in government debt securities may differ from that for private

debt securities—the compiler should be aware of the increased possibility for the double counting of activity when more than one method is used.

**13.37** To reduce the possibility of mismeasurement, particular care needs to be taken in deciding on the respondent population; as noted in the previous chapter, a register of reporters, kept current, is essential and could be drawn from a centralized national register of reporting entities maintained for national accounts reporting purposes.

### Periodic Position Surveys

**13.38** As mentioned above, in the short term some economies might compile position data by accumulating transactions on a previous position. However, it is important to conduct periodic benchmark position surveys, perhaps at least once a year, as changes in the positions of listed securities can be significant due to fluctuations in market prices. The sources of position data could be different from those for transactions data. For instance, data on transactions might be compiled from information supplied by dealers or organized exchanges, whereas custodian information might be used for the position data. The results of the position survey can then be checked against the cumulative transactions data; in other words, reconciliation can be undertaken. This reconciliation is particularly important when financial intermediaries are reporting transactions because it can reveal inconsistencies and errors in reporting that might not otherwise be spotted. In some ways, independent verification of the data is helpful for the robustness of the compilation system. Alternatively, the same institutions could be approached for both transactions and position data so that any discrepancies can be rectified and improvements made for future years.

### Counterpart Information

**13.39** Because of the need to improve the coverage of portfolio investment assets globally, and also because of the difficulty of identifying nonresident ownership of resident securities, the IMF, in cooperation with other international organizations, has promoted the development of a Coordinated Portfolio Investment Survey (CPIS).<sup>10</sup> The CPIS collects comprehensive

<sup>10</sup>For CPIS data and metadata, see <http://cpis.imf.org/>.

information on year-end holdings of portfolio investment securities by individual economy, both equity and debt securities, valued at market prices, and cross-classified by economy of issuer of the security. The CPIS was conducted for the first time with a reference date of end-December 1997, and the results published in 1999. The CPIS has been conducted annually since 2001.<sup>11</sup>

**13.40** In 2009, the “Group of Twenty (G-20) Finance Ministers and Central Bank Governors Working Group on Reinforcing International Co-operation and Promoting Integrity in Financial Markets” called on the IMF and the Financial Stability Board (FSB) to explore information gaps and provide appropriate proposals for strengthening data collection. In response to the request, the IMF and the FSB Secre-

tariat staff presented a report<sup>12</sup> outlining 20 recommendations for closing data and information gaps. Two of these recommendations refer to the CPIS (Recommendations 10 and 11).<sup>13</sup>

**13.41** In consultation with the IMF Committee on Balance of Payments Statistics and numerous data users, several enhancements to the CPIS have been implemented. Such enhancements include increased frequency (semiannual CPIS data collection starting with June 2013 reference date), timeliness (a dissemination lag of less than nine months), and scope (collection on a voluntary basis of data on the institutional sector of the foreign debtor and on short or negative positions). Also, the IMF Executive Board agreed to include the CPIS data in the SDDS Plus<sup>14</sup> beginning in 2015.

<sup>11</sup>The coverage of the CPIS is augmented with information from two other surveys, namely, the Securities Held as Foreign Exchange Reserves (SEFER) and the Securities Held by International Organizations.

<sup>12</sup>*The Financial Crisis and Information Gaps*, IMF staff and Financial Stability Board (FSB) Secretariat, November 2009.

<sup>13</sup>Recommendation 10 states that “All G-20 economies are encouraged to participate in the IMF’s CPIS and in the BIS’s International Banking Statistics (IBS). The IMF and the BIS are encouraged to continue their work to improve the coverage of significant financial centers in the CPIS and IBS, respectively.” Recommendation 11 states that “The IMF, in consultation with the IMF’s BOPCOM, to strive to enhance the frequency and timeliness of the CPIS data, and consider other possible enhancements, such as the institutional sector of the foreign debtor.”

<sup>14</sup>See also Box 4.1.