

Background issue paper

Paul Van den Bergh¹

This IFC Workshop brings together users and compilers of securities statistics from a broad range of countries, with securities markets that are at different stages of development. The objectives of the workshop are:

- to share information on ongoing and planned initiatives to improve global comparisons of securities statistics,
- to share expertise in the compilation of securities statistics, and
- to identify and discuss key methodological issues that arise in the compilation of securities statistics, for both issuance and holdings.

In line with recent discussions in other international groups and with analyses and proposals made in various policy reports, the focus of the workshop is on debt securities. This note provides background information on the individual topics on the workshop agenda and also lists a number of key issues for discussion. The individual sessions are based on short individual presentations, which are followed by general open discussion, focused around the key issues identified below.

1. Uses of securities statistics

Broad range of requirements. Users of statistics on debt securities may have a broad range of requirements. From an operational perspective users will want information in order to be able to process securities transactions. Those users are not interested in statistics, but rather in the individual “technical” characteristics of the securities. Specialised financial institutions will also want information to establish league tables for particular financial services such as securities underwriting, or to gauge their market share in particular segments of the securities markets.

From the perspective of economic, monetary and financial stability analysis there are also a range of requirements. Moreover, these requirements have multiplied in recent decades, in line with the growing importance of securities markets in many countries around the world. To list just a few examples (not in order of importance):

- analysts of the transmission mechanism of monetary policy may want to know the relative importance of fixed vs floating rate instruments;
- analysts of securities market activity will want to understand the relative importance of different sectors issuing in domestic securities markets, including non-residents;
- similarly, market analysts may want to monitor particular market segments or financial instruments (eg index-linked debt, commercial paper, notes and bonds);

¹ Head, Information, Statistics and Administration, Bank for International Settlements, paul.van-den-bergh@bis.org, +41 61 280 8432.

- in order to understand the impact of debt restructuring, a differentiation will need to be made between gross and net issues, both in terms of amounts outstanding and new issues;
- those interested in debt positions and debt servicing capabilities might prefer data on a residual maturity rather than original maturity basis;
- analysts interested in tracing the importance of credit risk transfers are particularly interested in monitoring securitisation;
- in order to analyse the growing role of non-bank financial institutions, measures of the securities issues held through institutional investors are important;
- concerns about currency mismatches may lead analysts to pay particular attention to the use of the domestic currency vs foreign currency in domestic and international securities markets;
- measures of the value of household wealth, or of collateral used in financial transactions, require information not only on the contractual/face value of securities but also on their market value;
- information on holdings of securities may be useful in order to understand who is exposed to particular issuer categories (such exposures can often be altered through transactions in derivatives markets so that good data on these markets may also be necessary);
- in order to understand the openness of the national capital markets, analysts may want to have accurate data on the issuance activity of non-residents in domestic markets as well as on the holdings of domestic securities by non-residents;
- to analyse competitive pressures in capital markets and the impact of structural changes (deregulation, consolidation, innovation) in markets, a distinction may need to be made between national/domestic securities markets and international markets;
- those interested in market infrastructures may want to know the amount of securities used as collateral and the volume of trading, clearing and settlements of securities and the impact of securities settlement on payment systems.

For central bankers, the financial stability issues related to securities markets have clearly become more important over time. Previous episodes of financial instability have shown the dangers of excessive build-up of debt as well as the risks of mismatches between the maturity or currency of debt and that of related assets or cash flows. For example, businesses that issue commercial paper to finance long-term projects are vulnerable to surprise increases in interest rates or the drying up of liquidity and funding in the related markets. Governments that have tax revenues in local currency and debt in foreign currency are vulnerable to exchange rate depreciation, even if the initial level of debt is not especially high. Existing sources of data on issuers and holders of debt securities often provide few details on currency, maturity or other key characteristics of the debt. More recently, analysts have tried to track the growth in markets for securitised debt. Here too, limited information has been readily available from existing sources.²

² Some Governors of BIS shareholding central banks expressed a particular interest in better measures of securitisation during a meeting at the BIS in January 2007. It would be important to know, for instance, how much double counting may occur, for instance when asset-backed commercial paper is issued by a SIV or conduit against a pool of assets containing collateralised debt obligations that are themselves issued against asset-backed securities (for mortgages, credit cards or corporate credits).

National statistical agencies and central banks have been trying to compile aggregate securities statistics that can meet various needs of users and that are compatible or consistent with international statistical methodologies. In any data compilation exercise it is important to establish clearly in advance the purpose of the effort and the use that will ultimately be made of the data. It is also important to ensure, as far as possible, that statistics are internationally comparable and can be linked to other datasets used for economic, monetary and financial analysis.

Data used in financial stability analysis and reports. The analysis of securities markets plays an important role in financial stability reports published by many central banks around the world, as well as by international financial institutions. Since the recent financial turmoil has focused on developments in the credit markets in major financial centres, debt securities statistics have been exploited in much detail nationally and internationally. Analysis has been carried out, for instance, of the size of subprime mortgage instruments outstanding, both in terms of absolute amounts and as a relative share of global securities issues. There has also been interest in knowing the size of securitisation through special purpose entities such as SIVs and conduits, in particular asset-backed commercial papers. Moreover, analysts have struggled to identify the owners of subprime instruments and their exposures (direct through legal ownership and indirect through credit risk transfers such as credit default swaps or insurance).

More generally, central bank financial stability reports in many emerging and developing countries have carefully described recent developments in their securities markets. One aspect has been to illustrate the (often shrinking) size of international securities that are part of countries' external debt. Another has been to document the emergence and growth of local currency domestic securities markets, which are seen by many as a positive sign of financial deepening. In order to promote the development of securities markets, there have been various regional and international initiatives to bring together reference material on such markets, including statistics on issuance and holdings (these reference databases, such as the ADB's Asian Bond Monitor or the World Bank's Gemloc Program are broader than just statistical datasets and also include descriptions of the local market structure, regulation and operations).

Recent international recommendations to improve securities statistics. In May 2007 the G8 Finance Ministers issued an action plan for developing local bond market in emerging market economies and developing countries. This included the broadening of the database on EME bond markets, particularly with respect to currency composition, maturity and coverage of corporate bond issues. In January 2008 a follow-up conference was held to assess implementation of the recommendations to date. Progress was noted with respect to improving and compiling internationally comparable securities statistics and the development of an international compilation guide for securities statistics. Suggestions were also formulated for refining the Coordinated Portfolio Investment Survey (CPIS) and for studying the potential advantages and costs of a global security-by-security database. Some of these issues were discussed under agenda item 8 at the workshop (see below).

In June 2007 the Committee on the Global Financial System (CGFS) issued a paper on financial stability and local currency bond markets, which contained relatively comprehensive data on these markets in various countries around the world. In order to improve data on local currency markets it proposed that central banks work with the BIS to strengthen national securities statistics and their regular dissemination through the BIS securities statistics. Specific proposals included better breakdowns by instrument, currency of issue, sector of issue and maturity, as well as measures of debt securities outstanding at residual maturity. Some proposals also related to estimates of aggregate holdings of securities by broad sector, at least for non-residents. As discussed under agenda item 8, the BIS has started to follow up on these various proposals with many central banks represented at the workshop.

Issues for discussion:

1. *Most recent attention in securities statistics has come from the perspective of financial stability. What are the specific user requirements with respect to monetary stability? Are these likely to pose new or specific challenges in coming years?*
2. *In terms of financial stability, many requirements have been identified in the context of promoting the development of efficient securities markets in emerging and developing countries. What data challenges have arisen as a result of recent financial turmoil in more mature financial centres? Are these similar to or different from the issues identified in official reports from the CGFS and G8?*
3. *The recommendations for improving bond markets, particularly in emerging markets, have included suggestions for improving transparency through better disclosure of key information of interest to potential investors and borrowers. How important are official statistics on bond market activity in this respect?*

2. Sources of debt securities statistics

The issuance, custody, trading and transfer of ownership (settlement) of securities are highly automated processes. Moreover, nowadays most debt securities exist only in dematerialised form and are increasingly held by end investors through institutional vehicles such as pension funds, insurance companies and investment funds. The latter rely on specialised custodians to manage the administration of their portfolios. So, in principle, there are many potential types of data sources on securities issues and holdings that can be used by statistical data compilers.

Institutional sources. In most countries and markets, securities issues need to be announced (a market or regulatory authority usually keeps an issue calendar in order to avoid issues being concentrated on the same dates). Securities are deposited in the account of central securities depositories (CSDs) and custodians, who keep track of the ownership of securities (in some countries there are also registrars who keep a register of the holders of a company's debt and equity). Securities are traded on exchanges or over the counter, which results in some form of documentation and matching of trades. Finally, transactions need to be settled, ie the transfer of ownership needs to be recorded in the books of CSDs or custodians and the respective amounts paid.³ CSDs work together to develop securities numbering systems, such as the International Securities Identification Number (ISIN) under the auspices of the Association of National Numbering Agencies (ANNA). In most cases these institutional sources can provide detailed data on individual securities issues.

Commercial sources. Since market participants need to have timely information on key securities reference and price data, various specialised commercial data vendors offer services domestically and internationally for reference and corporate actions data as well as for timely price data of individual securities. Rating agencies also sell information on the securities they rate. Because of their purpose, these commercial sources provide information at the level of individual securities. Commercial data vendors consist of large multinational companies that sell very large databases of information on international and domestic securities, as well as smaller specialised vendors that cover particular jurisdictions or instruments.

³ After trading has taken place, a central counterparty sometimes clears the trades by interposing itself between buyers and sellers, thereby reducing the number of transactions to be settled.

Official/regulatory/supervisory data. Most countries will have a central office for government debt management, which can provide data on issues, and sometimes holdings, of government debt.⁴ Data on issues and holdings by banks and other financial institutions, among others, can probably be obtained from money and banking statistics, special financial market statistics, various supervisory reports and/or regular surveys. Official surveys of securities transactions and holdings of households and non-financial corporations may also be conducted at regular intervals. Many countries have reporting requirements or administrative procedures for non-resident issuers that can be used. Additionally, countries with International Transaction Reporting Systems (ITRS) will be able to obtain detailed information on individual cross-border portfolio investments. Other countries may have similar reporting systems.

Custody data. Most securities have only one issuer, price and rating, as well as a series of specific individual characteristics. However, they typically have a wide range of holders, many of which hold titles to the securities through various institutional investors (pension funds, insurance companies, and mutual funds). The latter in turn hold their securities with specialised custodians, which in turn hold accounts with a Central Securities Depository. The result is a structure of layered securities accounts, which normally identify the holdings of securities only at their respective level.⁵ Most of this information is, of course confidential and proprietary.⁶ In order to track the changes in ownership of securities, the only approach might be to conduct regular surveys of custodians at different levels in the chain of holdings.

Combining different sources. Although it is mostly available in electronic form, information on securities is typically spread across different organisations and applications. For countries with highly developed securities markets in particular, with many specialised market segments and competing trading platforms, the information may be greatly decentralised. It is therefore a challenge to develop accurate and comprehensive securities statistics. Even where information is readily available from one or more sources, a major difficulty from a statistical compiler's point of view will be that the various sources use different classifications schemes and data exchange formats. This may make it difficult to group data and construct meaningful aggregates with relevant breakdowns. It may also make it difficult to track particular new developments or innovations, unless they have been identified separately.

Particular challenges are posed by very short-term securities, whose lifespan is limited to a few quarters, months or even less. Other challenges relate to the tracking of gross issuance, redemptions, corporate actions such as mergers and acquisitions, restructurings, and net issuance. Consistent data on amounts outstanding (stock) and net issuance (flow) are therefore not easy to come by. The biggest challenge, of course, remains the tracking of the ownership of securities since it is difficult to establish at every point in time the precise ownership (and therefore the SNA sector allocation) of all securities issued, particularly when they are actively traded in secondary markets and regularly used within collateral operations; session 6 addressed these issues in more detail.

One constraint facing compilers is that information in most of the available sources is not constituted to feed statistics but to support business decisions. Owners of information do not have an interest in providing their data in a way that is immediately of use to statistical

⁴ However, data from state and local authorities (and their enterprises) may be less easy to collect, particularly in countries with strongly decentralised political structures.

⁵ In countries/jurisdictions where the ownership of a company's debt securities and equity is tracked by a registrar, the latter often knows only the name of the nominee holder, and not necessarily that of the ultimate holder.

⁶ Some large custodians sell aggregate information on flows through their custody accounts as an indication of market trends, for instance in terms of institutional investment flows to individual countries or instruments.

compilers. A particular concern or frustration for statistical compilers is the quality of data sold by data vendors. Commercial data providers are not typically familiar with the categories of statistics (for example SNA '93 or ESA '95 classification) and do not have an incentive to upgrade their databases to meet the requirements of statisticians. After all, central banks or other statistical agencies are not the major clients of these vendors. Cost-benefit trade-offs may therefore be difficult to make with respect to purchasing commercial data sources.

Methods of collecting and combining source data. There are two basic methods for compiling securities statistics: a direct or security-by-security approach based around information on individual securities, and an indirect or aggregated approach relying on aggregate reporting by, and/or surveys of, appropriate institutions. The first method taps directly into a range of micro databases at different organisations, while the second collects data in a standardised form and relies on compliance by reporters such as issuers and lead managers. Both approaches have their relative merits and drawbacks.

Reporting systems on an aggregated basis impose a greater burden on the reporters, because they have to calculate the prices of securities and complete the necessary aggregations as well as use of proper classifications. This system requires the reporters to maintain a securities database and a register of statistical classifications. In contrast, in security-by-security compilation, data are collected for each single security from various sources. Compilers themselves then complete the necessary filtering, categorisation and aggregation. This requires compilers to maintain a securities reference database. The advantages of a security-by-security approach were discussed in more detail in session 6 of the workshop (see below).

Timeliness of available data. Whatever method is used, there are various steps involved in the compilation and dissemination of securities statistics. Whereas available securities statistics might be relatively useful to understand structural developments in securities markets as well as the microstructure of the markets, they may be more difficult to use when there are major and rapid market developments. Indeed, when market tensions start to affect market conditions significantly, it may take some time before all the source data can be combined and adjusted to take account of new developments and to support the analysis of specific issues.⁷

The fact that statistical data are normally available only some time “after the fact” can pose a major challenge for central bank policymakers. In the summer of 2007, for instance, events in financial markets were moving at a rapid pace and important decisions needed to be made within short time frames and with limited information. The Reserve Bank of New Zealand was able to obtain some information for monitoring developments on a near real-time basis and for supporting the decisions that were made to ensure the stability of the financial system.

Issues for discussion

1. *Is it possible to convince owners/vendors of commercial and institutional securities databases to improve the quality of their data to meet statistical requirements? Alternatively, can statistical requirements be redefined such that vendor data could be readily used, thereby reducing the cost to and burden on both reporters and data compilers?*
2. *Much information on individual securities issues is publicly available, for instance from institutional sources. Is there a mechanism to ensure that it can be obtained*

⁷ A security-by-security database combined with tick-by-tick price/transactions data and a monthly security-by-security reporting system for holdings might be reasonably flexible. Still, in times of turmoil additional information might be required in order to track developments specific to the event.

and exploited by statistical compilers of official securities statistics? How difficult is it to reconcile aggregate and individual securities data obtained from different sources?

3. *It might be possible to track data on issues/issuance of securities statistics on a more or less ongoing basis. Since measurements of holdings of securities will continue to require the conducting of surveys of direct or indirect (institutional investors) portfolio owners, what is the most realistic frequency with which this information can be obtained without putting undue burden on reporters and compilers?*

3. Methodological approaches and country experiences in compiling statistics on debt issuance

Reflecting the relative state of development of their national securities markets, securities statistics differ considerably from one country to another. Many of the statistics have also evolved over time. For instance, in most cases the early development of securities markets sees the issuance of short and, if there is enough monetary stability, long-term debt instruments, primarily by the government. This is normally followed by debt issuance by banks and, subsequently, by other financial institutions. Issues by the non-financial corporate sector, at least the private one, tend to come at a relatively late stage (securities issuance by this sector tends to start with equity). As markets develop and grow, the complexity of the number of instruments and issuers grows and local currency instruments become more important. For securitisation to emerge, proper operational, legal and governance arrangements need to be in place.

Much of the development of securities markets is determined by regulations, for domestic as well as cross-border transactions. At the domestic level, banks, institutional investors and other resident sectors might initially have regulatory requirements to hold their securities portfolios, in particular domestic instruments (eg government debt). External capital controls may limit issuance in the domestic markets by non-residents, as well as issuance abroad by residents. Regulations may also constrain the holdings by residents of issues by non-residents. Only the (central) government is allowed/able to borrow in the international markets, typically in foreign currency.

In such controlled environments, the collection and compilation of securities statistics may be relatively straightforward. However, as markets develop and controls are relaxed, the complexity of securities transactions may grow very rapidly and quickly pose major challenges for statistical compilers. Sometimes statistical data are available from different national sources, which are not always compatible or comparable. Central banks play an important role in the area of securities statistics as a result, probably, of their responsibility for compiling balance of payments, financial account, and other financial statistics.⁸

Differing national practices. A preliminary analysis of the national data published by a number of countries indicates that national practices in compiling and disseminating securities statistics differ significantly from one country to another. Some countries, such as the United States and the euro area, have developed securities statistics based on the principles of the financial accounts framework. They measure the issuance of all the resident sectors, irrespective of whether these are in the domestic or international markets. Others,

⁸ Of course, national statistical institutes may also have a vital role to play in collecting and compiling securities data.

such as Australia, follow the same approach but also calculate separate data for their domestic market, including issuance by non-residents in their jurisdiction. Many emerging and developing countries also focus on their domestic markets, but, as mentioned above, this might be the result of the fact that cross-border issuance and holdings are restricted by capital controls. In most cases, however, the methodological notes attached to the national statistics make it very difficult to know exactly what they cover.

Breakdowns by institutional sector, instrument, currency and maturity differ significantly from one country to another. Most countries provide debt securities data at nominal/face value and at original maturity. There is typically no consistent set of data that reconciles amounts outstanding and gross and net flows. Sometimes a specific set of securities receives special attention in official statistics. This is typically the case for government debt as well as for commercial paper (the latter is covered in much detail for the United States, for instance).

Compiling information on issuance and holdings. Most national securities statistics focus on the issuers of securities, ie on the liabilities side of the different sectors in the economy. Little information is provided on holdings of securities, and is scattered in separate data on balance sheets of the individual sectors. Not surprisingly, data on ownership are most detailed for banks and other financial intermediaries such as pension funds, insurance companies and investment funds. In terms of global cross-border holdings, the major source is the Coordinated Portfolio Investment Survey, now organised annually by the IMF. Although the data are also available from the “mirror image” of the CPIS, some countries separately survey the holdings by non-residents of domestic securities (this was discussed in more detail in session 6 – see below).

Sources and compilation methods. Official compilers of statistics tend not to produce much detailed information on the underlying sources for securities statistics, or on the underlying method(s) for calculating them. Apart from the euro area countries, it is very unclear, for instance, which countries have developed a security-by-security database or are in the process of developing one. Other types of reference metadata that would allow us to understand the context of the securities statistics are also lacking (see below).

International comparability of securities statistics and their quality. For some time, the BIS has been collecting data on domestic debt securities issues from selected central banks, or indirectly from other published or unpublished national sources. Information on international and domestic debt issues is published in the Statistical Annex of the *BIS Quarterly Review* and is also made available on the BIS website, www.bis.org. The collection of information from national sources has been a challenge, particularly in terms of identifying and categorising the different statistics and comparing them internationally.

Since there is no specific international methodology for compiling securities statistics,⁹ one way to assess the quality of national securities statistics, and their international comparability, is to use the IMF’s Data Quality Assessment Framework (DQAF). This Framework is in six sections. In addition to a set of prerequisites for data quality, it covers five dimensions of quality: integrity, methodological soundness, accuracy and reliability, serviceability, and accessibility. It is probably fair to say that many official securities statistics fall short of best practice in one or more of these dimensions.

Taking the “prerequisites of quality” first, in many countries there is no legal or institutional framework for collecting, compiling and disseminating securities statistics, although central banks seem to be playing a major role in this area. Resources for this type of statistical exercise are often insufficient and quality awareness limited. In terms of “integrity”, most

⁹ As argued below, the SNA financial accounts and the BPM6 portfolio investment methodology provide only a high-level framework.

national compilation exercises might benefit from better processes to ensure that the principle of objectivity in the collection, processing and dissemination of statistics is observed. This might require greater professionalism of the staff involved and more transparency in the public dissemination of the data. It is probably in the area of “methodological soundness” that most progress can be made, by individual statistical compilers, and collectively. Indeed, more efforts should be put into determining the scope of securities statistics, developing appropriate concepts and definitions, maintaining proper classifications (in particular for sectors and instruments), and agreeing on accounting rules (eg valuations).¹⁰

Improvements in these areas will probably contribute to improve the “accuracy and reliability” of securities statistics as well, since compilers will be able to upgrade their data management procedures and statistical techniques. As a result, the “serviceability” of securities statistics, which is currently probably insufficient, might be enhanced in the foreseeable future. Securities statistics would therefore become more relevant, ie be in line with (evolving) user requirements, as well as more timely and more consistent. Finally, improvements could be anticipated in the “accessibility” of securities statistics, at the national, regional and international level.

Issues for discussion

1. *What approaches have individual statistical organisations used to compile national official securities statistics? Has it been determined by the state of development of their respective national securities markets?*
2. *Have compilers applied relevant international standards for categorising key elements in securities statistics such as sectors, instruments, stocks and flows, interest income, accounting rules, maturity, currency?*
3. *Have compilers looked at data from other countries to identify how their national data could be compared to those from other countries? How useful is the IMF DQAF for evaluating the quality of securities statistics? What are the major weaknesses in securities statistics from this perspective?*

4–5. Specific methodological questions regarding debt securities issuance

In order to improve global comparison of securities statistics, it would probably be useful to develop a common methodological framework that compilers can refer to and implement. As mentioned in session 8 (see below), thought is being given at the international level to drafting such guidelines. The workshop is a good opportunity to identify specific methodological questions, particularly with respect to debt issuance statistics.

Anchoring methodologies in the financial account framework. It is possible to develop a model for securities issuance statistics on the basis of established international statistical standards such as those for national and financial accounts, money and banking statistics, as well as the BOP and IIP. Table 1 shows the securities statistics from the perspective of the financial accounts. These are meant to show the asset and liability positions of the major sectors of the economy: the general government, non-financial corporations, financial

¹⁰ The development of an international compilation guide for securities statistics could probably make a major contribution. This was discussed in session 8.

corporations, households and non-residents. The full financial accounts would show a sector-by-sector matrix, ie flow of funds from/to any one sector to/from all the other sectors.

It is not straightforward for users/analysts to derive securities statistics directly from these accounts since the securities markets are not identified as a separate sector of the economy, unlike banks or other financial intermediaries. Intermediation through the securities markets therefore needs to be tracked by looking at the instrument breakdown of the assets and liabilities of the various sectors of the economy. The securities instruments would be one component within each of the cells in this matrix. The financial accounts framework by itself does not generally provide a detailed breakdown by type of debt instrument, currency and maturity, although it could be extended to provide such additional detail.¹¹

“Residency of issuer” vs “location of issue”. With respect to securities issuance, the approach most consistent with the financial account framework would be to classify securities issues on the lines of “residency of issuer” as shown in Table 2. The focus would be on the global issuance activity of the domestic sectors of the economy, ie in the domestic and international markets (the latter consists of jurisdictions of other countries or multiple jurisdictions). One would thus look at the entries in the table vertically. Issuance by non-residents in the domestic markets would, in principle, be included in national statistics of other countries.

Alternatively, a “location of issue” approach would classify debt securities statistics based on the geographic delineation of securities markets. Indeed, each country would normally have a national regulation to govern the operation of its national securities/capital market. Such regulation would spell out who is allowed to issue securities; what instruments can be used; and whether there are disclosure, listing, registration and numbering requirements. The statistical framework would thus capture securities that have been issued in the domestic market/jurisdiction by all sectors, residents and non-residents. In other words, one would be looking at the entries in the table horizontally. National data from other countries could be used to obtain data on issues by residents abroad, as well as on issues by non-residents abroad in local currency.¹²

One complication that arises with the “location of issue” approach will be the treatment of exemptions that some countries make in the regulation of issuance of certain international or offshore securities. These may include the reduction in disclosure, listing or registration requirements. Regulation in this securities market segment could also be delegated to self-regulatory organisations such as the International Capital Markets Association. Such exemptions may be granted to attract business to the offshore part of the securities markets where non-residents can issue, purchase and trade securities. They also facilitate the issuance/placement of issues by residents.

The first key methodological question for compilers of securities issuance statistics to address might thus be whether a distinction should be made between domestic and international issues/markets. The latter are captured, on the basis of commercial and institutional sources, by the BIS international debt securities statistics, as shown in Table 3. They cover most, if not all, of the issues by residents of each country abroad, in domestic and foreign currency, as well as their issues in the domestic market in foreign currency. The BIS domestic securities issuance statistics are meant to cover only domestic issues by

¹¹ The balance-sheet approach promoted by the IMF in fact extends the financial accounts framework to provide a number of such breakdowns.

¹² A clear delineation of domestic and international issues would be necessary in order to allow international comparisons as well as the aggregation of securities issuance statistics at the global level. There is a clear risk of double-counting, also because some securities issues are placed simultaneously in more than one market.

residents in local currency.¹³ It has been pointed out, however, that the segregation of domestic and international securities data may be less relevant when financial markets become more open to foreign users and providers of funds.

Breakdowns by sector, instrument, maturity, currency. A number of recent studies or policy papers have suggested that, whatever “market distinction” is made, a minimum number of additional breakdowns would be useful for the analysis of securities markets from the perspective of financial stability analysis.

As shown in Table 4, a more refined sectoral breakdown could be provided. For instance, the general government could be broken down into central government, state and local government, and social security funds. For financial corporations a distinction could be made between the central bank (eg its issuance of sterilisation bonds), banks (monetary financial institutions), investment funds, insurance companies, pension funds, and other financial corporations and financial auxiliaries. Also, in order to capture the securities issues resulting from securitisation a separate category could be created for special purpose vehicles, which are used to pool the underlying loans and to issue the securities in the market. Finally, an even finer distinction could be introduced to differentiate between public and private financial corporations and non-financial corporations, or between domestic and foreign-controlled financial and non-financial corporations.

Although the concept of residency might be relatively straightforward and in line with other international statistical standards, a particular issue arises in the context of securities issuance. Indeed, in some cases issues are placed by non-residents using a special company set up for the sole purpose of placing “local” securities. In a strict sense, these are resident entities, though they exist only for the purpose of issuing securities by non-residents. The question therefore arises of whether for statistical/analytical purposes they should be categorised as resident or non-resident.¹⁴

Data on the issuance of debt securities by each of these sectors could be broken down in different ways. A currency breakdown could usefully be made, with at least a distinction between local and foreign currency issues (possibly with the separate identification of issues in the major foreign currencies). Another would be to distinguish between the maturity of securities issues: short term (one year or less), and long term (more than one year). Original maturity would be used, though it might be useful to also have data on a residual maturity basis. A more detailed breakdown could be made for the type of instrument, for instance coupon type (fixed, variable, zero), rating, or collateralisation/securitisation (asset-backed, mortgage-backed, collateralised debt obligation). Whereas maturity and currency are standard concepts in financial statistics, there is no agreed detailed international classification of financial instruments.¹⁵ International guidance might therefore be useful on the classification of debt instruments.¹⁶

¹³ In some cases the BIS can obtain local currency domestic securities statistics directly from national sources. Where countries adopt a residency of issuer approach in their national statistics, the BIS subtracts from the national data the corresponding international securities data it has for the respective issuers resident in that jurisdiction.

¹⁴ Under the methodologies for aggregate euro area securities statistics, these entities are treated as non-residents.

¹⁵ For the euro area such a classification has been developed by the ECB.

¹⁶ There is also the issue of whether debt securities instruments/statistics should include private placements. Moreover, new innovative financial instruments can have “hybrid” characteristics and could thus be classified as debt securities, equities or financial derivatives depending on which characteristic is considered decisive by the compiler.

Table 4 shows how a data template could be developed along those lines. Although the number of entries might look large, for many countries only a few of them would be relevant or significant. One could therefore capture the most important statistics on issuance with less than 50 time series. Also, in terms of implementation of a more coherent framework, countries could start with the key breakdowns and then provide more detail over time as their debt securities markets develop and mature. In some cases more breakdowns may be available, such as other subsectors of the financial corporation sector.

Stocks, flows and valuations. As for the financial accounts more generally, securities issuance statistics could, in principle, be made available not only in terms of amounts outstanding (stocks) but also of issuance (flows). The latter would distinguish between gross issues, repayments and restructurings. If, in line with SNA and BPM methodology, debt securities issues were to be measured at market value, there would be a need to record valuation changes separately.¹⁷ However, even for face/contractual value the question is how to deal with (partial or full) reimbursements and how to determine what is included in the issue price (and nominal value) and what is not (eg accrued interest).

Reference metadata. In order to understand individual series on securities statistics, or related groups of series, it will be useful for analysts to have a minimum amount of so-called reference metadata. This would cover non-statistical information on the securities market in individual countries (as shown in Annex Table 5). The information would indicate, among other things, the various publications (printed or on websites) where national/domestic securities statistics might be available. Metadata would definitely be required for users to be able to identify whether compilers are following a “location of issue” or “residency of issuer” approach. Clarity on the approach used is absolutely essential for data analysts before they look at further breakdowns in the numbers by subsector, currency, instrument and maturity.

Issues for discussion

1. *Existing international statistical standards, such as the SNA, might provide a good general framework for securities statistics from a perspective of monetary analysis. In contrast, a similar framework for financial stability purposes is largely lacking (eg operational definition of a financial company group, bond insurance, links between securities and derivatives). What are the key/priority methodological issues that should be addressed in the development of a compilation guide for securities statistics that would allow both monetary and financial stability considerations to be taken properly into account?*
2. *How useful is the distinction between domestic and international markets for users and compilers of statistics in mature financial centres and emerging/developing countries?*
3. *Which methodological approach could be used to develop statistically useful measures of securitisation? Would a specific sectoral category for issuance by special purpose vehicles (under financial corporations) be a useful step forward?*

6. Statistics on holdings of debt securities

There is little doubt that there is a paucity of data on the holdings of securities. With the growth in primary and secondary market activity, the increasing role of institutional investors,

¹⁷ It should be noted that other Manuals, such as the one for Monetary and Financial Statistics, recommends market valuation.

and the rapid expansion in cross-border portfolio investments it is almost impossible to track the ultimate ownership of individual securities on an ongoing, real-time basis. The only remaining solution is to carry out regular or ad hoc surveys of registrars, custodians, securities depositories, banks and other financial institutions such as institutional investors, as well as households and corporations in order to measure developments in their holdings of securities portfolios. This can be combined with direct or indirect information on holdings, which may be available from tax authorities (through, for instance, interest income of households and non-financial corporations) and supervisory reports (eg from banks and other financial institutions).

Table 6 shows the analytical detail that some users are requesting in terms of holdings of debt securities. For the issues of each major sector, it would be useful to have aggregate data for the holdings by the other major sectors. Note that the sectoral breakdowns in the rows and columns in the matrix might be different. Aggregate holdings by the government sector might be sufficient, whereas for financial corporations a breakdown may be provided for the central bank, monetary financial institutions (banks), institutional investors (with a possible further breakdown, for instance, for pension funds, insurance companies, investment funds, hedge funds and sovereign wealth funds), non-financial corporations, households (these are not in the columns), and non-residents. Moreover, as recommended by the CGFS, the holdings matrix could be collected separately for short-term and long-term instruments. Of course, further instrument breakdowns might, in principle, be required (eg currency).

Cross-border holdings of securities: the CPIS. Interestingly, most of the information on securities holdings that is readily available concerns cross-border holding. This is probably related to the fact that cross-border portfolio investment flows have grown significantly in recent decades and have been the dominant type of international capital flows during certain periods. This has resulted in greater interest on the part of policymakers and analysts in adequate information on these developments.

An important initiative in this area has been the Coordinated Portfolio Investment Survey (CPIS) conducted by the International Monetary Fund for the first time in 1997 and then on an annual basis since 2001. The objective of the CPIS, which now involves 74 reporting countries, is to collect comprehensive information on the cross-border holdings of securities by the domestic sectors, ie monetary authorities, banks, other financial institutions (insurance companies, mutual funds and other), general government and non-financial sector (non-financial companies, households and other). Holdings include those held directly by the end investors and/or through custodians. The information is collected on a residency of issuer basis with geographic breakdowns (eg holdings of US residents of securities issued by residents of every vis-à-vis country). Securities include equities and debt securities (short-term and long-term) issued by non-residents in their national market, in international markets and in the domestic markets of the holders (separate data are available for equities and debt securities).¹⁸

Before the CPIS, most national statistical agencies were already collecting the related information on a regular basis in order to calculate the portfolio investment assets in their own country's IIP. The CPIS is now providing more detailed standards for the collection of such information, ensuring that the conduct of national surveys is done for a common reference period and according to a common framework. Moreover, and most importantly, the IMF can calculate and publish the mirror view of these holdings, ie the derived portfolio investment liabilities of individual countries. These can then be used by national statistical agencies to compile their country's international investment/liabilities position with the

¹⁸ Sectoral and currency breakdowns are also available at the individual country level.

sectoral and instrument breakdowns. In addition, the agencies can improve the calculation of the investment income in their national balance of payments and exchange bilateral data with other reporting countries.

Looking through layered holdings of securities. As described above (p. 5) many holders of securities keep their portfolio through accounts with custodians and central securities depositories. Also, many categories of owners, in particular households and non-financial corporations, hold securities indirectly through investment funds, insurance and pension funds. These various chains increasingly involve non-resident organisations, which further complicates the task of statisticians, who are trying to look through these layered holdings of securities.

Of particular interest are the challenges posed by repurchase agreements and securities lending and borrowing.¹⁹ Most of these transactions imply a change in legal ownership of the securities. In many cases, counterparties in these transactions use an intermediary such as asset managers, custodian banks and specialised third-party agents, some of whom may be located abroad. All this makes it very difficult for custodians to distinguish their clients' outright sales/purchases from repurchase and securities lending operations when completing survey questionnaires on securities holdings. Various international expert groups have looked at the issue and have noted that information on repurchase and securities lending transactions is hard to come by and to take into account in securities holding statistics (including CPIS). The challenge is likely to be as important when an aggregate measure of securities holdings is used by compilers as when a security-by-security approach is taken.

Holdings and exposures. The growing use of credit risk transfers, including financial derivatives, means that credit, market and liquidity risk exposures of the different categories of holders can be very different from what the data on outright holdings suggest. Indeed, resident and non-resident investors can employ a broad variety of derivative instruments and strategies to gain (additional) exposures, including the use of credit default swaps, total return swaps, credit-linked notes, exchange-traded and OTC interest rate swaps and futures, and deliverable and non-deliverable currency forwards.²⁰ Insurance instruments and guarantees can also be used to shift credit risk to, or away from, direct holders of debt securities. Moreover, the use of these instruments allows exposures to be changed very rapidly, and much faster than can be traced by observing changes in direct holdings of securities.

Issues for discussion

1. *What are the adjustments/issues to take into account when reconciling holdings and issuance statistics for debt securities?*
2. *What improvements could be made to the CPIS in order to improve its relevance for tracking cross-border holdings of debt securities (eg frequency, classification of instruments)? Some countries publish separate data on cross-border securities holdings: why do these sometimes differ from CPIS data?*
3. *Legal holders of debt instruments may not be the ones bearing the ultimate market risk exposures (eg due to the use of derivatives) or credit risk exposures (eg due to insurance). Is it possible at all to envisage statistical measures of the actual*

¹⁹ The paragraph draws on the paper presented by R. Chaudron at the 56th ISI Session in Lisbon (August 2007) on "Collecting data on securities used in reverse transactions for the compilation of portfolio investment: How to compromise between theory and practice".

²⁰ The 2007 CGFS report provides examples of how non-residents use derivative instruments to gain and manage exposures to local currency domestic debt instruments in the case of Brazil, Korea and Mexico.

exposures and their distribution across different categories of resident and non-resident sectors?

7. Security-by-security databases as a tool to improve securities statistics

A security-by-security database (SDB) is a repository of information on individual securities. For each security a number of characteristics are documented, sometimes grouped under different headings. For small databases, simple lists or spreadsheets can be maintained, whilst for more complex repositories, a relational database might be developed. The individual securities are first numbered, for instance using a national numbering system or ISIN codes. The database is then populated with information on the various characteristics of each security. This typically includes issuer data (name of issuer, sector, country, listing), instrument information (currency of denomination), event information (coupon dates) and price information (including ratings). The list of attributes can be as long as compilers/users require.

SDBs are typically built on the basis of unsorted data from different institutional and commercial sources. All this information is brought together and arranged in a comprehensive way. Duplications, errors and gaps are cleaned up. For large datasets containing millions of securities, powerful computers and sophisticated database software are used. Annex Table 7 provides a visual representation of a relational SDB database .

Benefits for compilers. Having a security-by-security database may have major benefits for compilers of securities statistics, in particular by reducing the reporting burden of reporting agents and improving the quality of the compilation of securities statistics. The normal starting point for compiling aggregate securities statistics would be to develop a reporting template that would satisfy user requirements, and to ask the appropriate reporting agents to mine their internal data to report this information on a regular basis. Reporters would classify their internally available information in terms of the statistical reporting forms, which is resource intensive (in many cases they rely on similar information from third parties such as securities numbering agencies). Since producing statistical reports is cumbersome (reporters are typically more interested in market concepts than statistical ones), the quality and timeliness of reports is not always sufficient. Moreover, as markets and user requirements evolve, the reporting templates and procedures would have to be adjusted along the whole chain.

A reference database for individual securities statistics could significantly reduce the resources involved. In fact, reporting agents would no longer need to map their internal data into statistical reports but could provide relevant information per individual security in their database. For instance, in terms of holdings, custodians would need only to provide data on the instrument codes and the number of debt securities held for each (category of) holder(s). Part of the reporting and database management costs is shifted from reporters to compilers, who will classify information according to statistical methodologies (eg sectoral and instrument breakdowns; stocks, gross and net flow calculations; original vs residual maturity estimations). Since classification is performed centrally by the compiler, the quality of the classifications can, in fact, improve significantly.

It should be pointed out that an SDB in itself does not constitute statistical information. A framework is required for translating the detailed information into appropriate statistical concepts and data, for instance to produce input for the calculation of the financial accounts, BOP, IIP and CPIS. Programs need to be developed for mining/reading the database to produce relevant statistics or conduct specific research.

Benefits for users. For analytical and research purposes, most users in central banks and outside would probably be satisfied with quality aggregate data on securities issues and holdings with adequate breakdowns. As securities markets become more complex and internationalised there may be an interest in more detailed disaggregated data or in combining different breakdowns (such as original and residual maturity). Sometimes a panel of individual securities data might be put together to analyse common developments, for instance for specific securitised debt instruments. The availability of a reference database of individual securities that supports the calculation of aggregate statistics allows this drill-down.

An SDB could, for instance, shed light on the financing of particular sectors (eg internet start-ups, real estate companies). It could also provide information about the size of particular market segments or the importance of particular instruments (fixed vs floating rate, securitised debt issues, subprime/junk debt). Other uses might be to track the number of rating upgrades or downgrades, (the impact of price changes on the value of particular types of collateral), or to estimate future payment flows resulting from coupon payments or corporate events.

A full-fledged SDB that includes detailed data on holdings would allow users not only to carry out traditional “institutional” analyses, but also to take a market approach to tracking the behaviour of issuers and holders. It would facilitate not only the from-who-to-whom analysis in financial accounting but also an in-depth review of market liquidity (eg through bid-ask spreads) and the degree of integration between markets. It could thus satisfy a very broad range of user needs.

Although the principal users of a SDB will be economists and statisticians in central banks, it should be possible, in principle, to use the information for other purposes as well. For instance, the database could be used to support central bank operations, as a source for collateral that could be eligible for open-market or lending operations.

Costs of SDBs. Although there may be a strong case for developing and maintaining a securities database, the benefits have to be weighed against the costs. Indeed, the initial development costs for setting up a security-by-security database may be significant. Commercial databases are not cheap and may be incomplete. Contacts with other data providers need to be set up for regular reporting or for conducting surveys. IT costs for database storage and processing may have come down significantly in recent years but could still be significant if a relational/dynamic system is developed instead of a simple “static” application, and/or if the volume of data starts to rise rapidly. A minimum amount of manual intervention will be necessary to develop and maintain the quality and timeliness of the individual pieces of data.

Experience with the CSDB in Europe and elsewhere. Recognising the benefits of an SDB approach, ECB and the euro area member central banks launched a major project to develop a Centralised Securities Database (CSDB). The initiative to develop the CSDB was launched in 1998 and officially approved by the ESCB Governing Council in June 2002. The main objective of the project is to compile a reference database of securities, issued by euro area residents and likely to be held or transacted by euro area residents. Compilation takes place by assembling data about individual securities issues from commercial sources and data reported by national central banks, cleaning it up, and in the future possibly incorporating all available information about holders. During the first phase, completed in April 2005, the ECB implemented a relatively “slim” version of the CSDB using an initial set of data. During the second phase, which is currently ongoing, the national central banks will be granted online access and the database will be enhanced in order to use it for regular statistical purposes. A later phase is expected to cover the collection of data on the holders of the securities stored in the CSDB.

The CSDB project has been complex and costly, from both a methodological and an operational perspective. One of the major challenges has been to deal with the legal obstacles preventing the exchange of data between the ECB, national central banks, the BIS

and a few statistical offices. Other issues were related to the availability of human, financial and IT resources. Finally, data quality had to be addressed regarding the classification of issuers, prices, coverage, and links between issuers and securities. The BIS has been, and continues to be, actively involved in the development of the CSDB. Its experts have participated in the meetings of the ECB statistical groups. The BIS also shares its international securities database with the ECB and assists in the CSDB's quality checking (in return it has access to the CSDB data).

Other central banks outside the euro area have also built, or are considering building, such databases.²¹ They include the Bank of Canada, the Bank of Thailand, the Central Bank of Malaysia, the South African Reserve Bank, and the Reserve Bank of New Zealand.

Challenges in developing and maintaining an SDB. Developing and maintaining an SDB can pose significant challenges. One major problem is the relation with institutional and commercial data vendors who provide much of the raw data for the database. They should ensure a minimum level of quality of the underlying data, in particular its coverage of the respective markets/instruments. Statistical agencies may not be the major clients of these organisations, so contract negotiations, including on service level arrangements, might be difficult. One open question is whether data providers might have an interest in having access to part or the whole of the SDB, and would thereby benefit from the quality management conducted by the central bank or national statistical institute.

Another challenge is to ensure that the SDB can be adapted to changing user demand. For instance, in June 2005, the Irving Fisher Committee on Central Bank Statistics organised a workshop, cosponsored with the Bank of Canada, on "Data Requirements for Analysing the Stability and Vulnerability of Mature Financial Systems". It identified a number of areas in which existing data could be better exploited, including the development of SDBs. It also noted that it would be desirable for data on individual securities to be linked with balance sheet information of the entities that issue them, particularly financial and non-financial corporations. The Bank of Canada's proposed SDB includes a linkage to issuing companies' balance sheet information.

Linkages between SDBs? In the late 1990s, discussions were initiated by the IMF with various international organisations, including the BIS, and national statistical agencies to review the possible advantages and disadvantages of promoting national security-by-security databases. One idea was also to develop a global clearing house for the national data, in other words, gradually to establish a global security-by-security database. While the concept seemed appealing in principle, there was a major uncertainty about the cost-benefit of such a global initiative. It was agreed to await the outcome of the CSDB project of the ECB before making any further analysis of the advantages and disadvantages of security-by-security databases and of a possible project to integrate them internationally.²²

Issues for discussion

1. *How convincing is the case for developing a security-by-security (sec-by-sec) reference database as a tool for compiling official statistics on debt securities issuance and holdings? What are the crucial elements determining the cost-benefit trade-off for developing a national sec-by-sec database?*

²¹ A number of central banks in emerging markets have a de facto security-by-security database for their domestic market, as they operate all the principal components of the securities market infrastructure, including the national CSD and a delivery-vs-payment securities settlement system.

²² The IMF has recently taken the initiative to reconvene the Working Group on Securities Databases (see below).

2. *Do sec-by-sec databases need to combine information on issuers as well as on holders? Is it possible to start with the former and then extend it to the latter? Could information on holdings be left in satellite accounts and linked to the reference database?*
3. *How could reference data from sec-by-sec databases be linked to other data sources such as balance sheet information of issuers?*
4. *What is the scope for sec-by-sec databases to provide information for ad hoc research or analysis as well as for supporting central bank market and lending operations?*

8. Cooperative efforts to improve securities statistics

Any efforts to improve the availability and international comparability of securities statistics must start with initiatives at the national level to improve national data. Various international and regional initiatives have probably contributed to convincing policy makers to support efforts in this area and to make additional resources available. Specific compilation guidelines might assist countries in collecting and compiling relevant data, and to making them publicly available in a user-friendly format.

Improving exchange of data among compilers. Efforts to improve security statistics may require a greater exchange of data among statistical compilers. As compilation methods come to rely more on security-level data there may be occasions when data exchange will conflict with legal requirements for data confidentiality. Even in the absence of legal constraints, the prospect of unwanted disclosure could lead to lower-quality data as respondents seek ways to avoid reporting. Mechanisms may need to be found to overcome these constraints.

Regional initiatives. Regional initiatives may help to focus attention on the need to improve securities statistics. For instance, the development by the ECB and the European System of Central Banks of a Centralised Securities Database has had major implications for the organisation and governance of central bank cooperation on securities statistics in the European Union. A common legislative framework may need to be developed for this, and financing and resource sharing arrangements worked out. In other regions, the regional development banks have taken initiatives, or are envisaging initiatives, to support improved statistical data on domestic securities markets.²³ These are often part of a broader set of actions to improve the efficiency and transparency of domestic bond markets through better disclosure of key information that interests investors and borrowers.

International initiatives. At the international level, the IMF Financial Soundness Indicators included a number of recommended indicators on securities markets, including indications of the stage of development in domestic markets and specific measures of market depth and tightness. More recently, in response to the recommendations made by the CGFS and G8, the IMF has reconvened the Working Group on Securities Databases. The Group, which includes the BIS and ECB as well as national central banks, has agreed to draft a Compilation Guide for Securities Statistics. The intention is to have a concise reference document, anchored in existing international statistical standards, that will address the key methodological issues identified at the IFC workshop, and will include some templates and a list of reference metadata. The Guide will focus initially on statistics related to issuance of

²³ This includes the Asian Development Bank, African Development Bank, Inter-American Development Bank, and European Investment Bank.

debt securities but will eventually be expanded to cover other securities as well as securities holdings. The Guide will contain an annex that will describe the advantages and disadvantages of security-by-security databases as a tool to support the compilation of securities statistics, and possibly a number of best practice recommendations in this area.²⁴

Improving the BIS securities statistics. With respect to improving actual data on securities statistics on the lines of the analysis and proposals made by the Committee on the Global Financial System, the BIS has launched a project to improve its domestic and international securities statistics. In October 2007 it contacted most of the central banks in the countries included in its domestic securities statistics, in order to achieve a regular reporting of some key national/domestic securities data and related documentation.²⁵ The BIS asked for central banks' assistance in bringing together the existing national/domestic data from different sources and reporting them using a coherent framework. The exercise does not require central banks to introduce a new reporting system within their countries. The focus is on data that are already available, either stored in statistical databases or published in statistical bulletins and websites of central banks or other agencies.

The BIS exercise does not favour or recommend a residency of issuer or location of issue approach. However, central banks have been asked to explain better what approach is being taken in their national/domestic securities statistics, and which details they have for debt issuance securities in terms of sector, instrument, maturity and currency. A simple set of reference metadata questions have also been circulated (see Table 5). So far no actual data have been reported but the qualitative information submitted is being reviewed by BIS statisticians and discussed with contact persons at central banks. It will form the basis for the mapping of national data into time series codes to be used for regular reporting to the BIS. The intention is to receive the securities market data from individual central banks on a regular quarterly basis in future. In parallel, the BIS is also improving its international debt securities statistics, in order to align them better with the national data it will be collecting. The intention is to disseminate an improved set of data in the *BIS Quarterly Review* and on the BIS website by the end of 2008.

Issues for discussion

1. *Are the various initiatives being considered to improve the availability and international comparability of securities statistics transparent to the national compilers? Should additional initiatives be envisaged?*
2. *How can national experts be (better) involved in various international initiatives to improve securities statistics? Would central banks be the natural contact point for any international initiative, even if other national statistical agencies or data owners/sources are involved in the development and maintenance of securities statistics?*
3. *Would national compilers benefit from a broader discussion on the advantages and disadvantages of security-by-security databases, including the sharing of country experience and of particular technical expertise (eg information model, database design)?*

²⁴ Once the ECB and ESCB project on the Centralised Securities Database is implemented the Working Group might discuss the possibility of creating a global securities database.

²⁵ This has not included the central banks of the euro area since they already publish a broadly comparable set of aggregated securities statistics that is generally consistent with the framework developed by the BIS. At some point the BIS will discuss with individual euro area central banks and the ECB how the data can be mapped into the reporting and dissemination template.

Table 1

Securities statistics in the financial account framework

Debtor sectors (issuers)	General government	Non-financial corporations	Financial corporations	Households	Non-residents	Total Assets
General government						
Non-financial corporations						
Financial corporations						
Households						
Non-residents						
Total liabilities						

Table 2

Two main approaches to compile debt securities issuance statistics

Breakdown		Sectors		General government	Financial corporations	Non-financial corporations	Residents	Non-residents	Total
Location of issue	Domestic market	Local currency							
		Foreign currencies							
		All currencies							
	International markets	Local currency							
		Foreign currencies							
		All currencies							
	All markets	Local currency							
		Foreign currencies							
		All currencies							
Residency of issuer									

Table 3

BIS international and domestic securities statistics

Breakdown		Sectors		General government	Financial corporations	Non-financial corporations	Residents	Non-residents	Total
Location of issue	Domestic market	Local currency	DDS	DDS	DDS	DDS	DDS	IDS	
		Foreign currencies	IDS	IDS	IDS	IDS	IDS	IDS	
		All currencies						IDS	
International markets		Local currency	IDS	IDS	IDS	IDS	IDS	IDS	
		Foreign currencies	IDS	IDS	IDS	IDS	IDS		
		All currencies	IDS	IDS	IDS	IDS	IDS		
All markets		Local currency							
		Foreign currencies							
		All currencies							
		Residency of issuer							

IDS: international securities.

DDS: domestic securities.

Table 4

Key breakdowns in debt securities issuance statistics

Sectors Instruments ¹	General government ²		Financial corporations ³			Non-financial corporations ⁶	All residents	Non-residents ⁷
	Total	Of which central government	Total	Of which central bank	Of which special purpose entities ⁵			
Local currency								
Short term ⁸ /total								
Long term ⁹ /total								
Floating rate								
Straight fixed rate ¹⁰								
Inflation indexed								
Exchange rate linked								
Hybrids ¹¹								
Other ¹²								
Total debt securities								
<i>Memo item: long term at remaining maturity up to one year</i>								
Foreign currencies								
Short term ⁸ /total								
Long term ⁹ /total								
Floating rate								
Straight fixed rate ¹⁰								
Inflation indexed								
Hybrids ¹¹								
Other ¹²								
Total debt securities								
<i>Memo item: long term at remaining maturity up to one year</i>								

For footnotes, see the end of the table.

Table 4 (cont)

Key breakdowns in debt securities issuance statistics

Sectors Instruments ¹	General government ²		Financial corporations ³			Non-financial corporations ⁶	All residents	Non-residents ⁷
	Total	Of which central government	Total	Of which central bank	Of which special purpose entities ⁵			
All currencies								
Short term ⁸ /total								
Long term ⁹ /total								
Floating rate								
Straight fixed rate ¹⁰								
Inflation indexed								
Exchange rate linked								
Hybrids ¹¹								
Other ¹²								
Total debt securities								
<i>Memo item: long term at remaining maturity up to one year</i>								

¹ Debt securities exclude repurchase agreements, ordinary shares, options, swaps, rights, warrants, and other financial derivatives. ² General government – central government, local government, state government, and social security funds. ³ Financial corporations – central bank, deposit-taking corporations (such as banks, credit cooperatives, building societies), money market funds, non-money market funds, other financial intermediaries (such as investment corporations, finance companies, lease companies), financial auxiliaries, captive financial institutions and money lenders (such as special purpose entities), insurance corporations, and pension funds. ⁴ Special purpose entities include special purpose vehicles, conduits and structured investment vehicles. ⁵ Non-financial corporations – national public non-financial corporations, national private non-financial corporations, and foreign-controlled non-financial corporations. ⁶ Residents – general government, financial corporations, and non-financial corporations (households and non-profit institutions serving households are excluded since they do not issue debt securities). ⁷ In case a location of issue approach is taken. ⁸ Also referred to as money market instruments. They include: treasury bills; bills of exchange; bill acceptances; bill endorsements; certificates of deposit issued with original term to maturity of one year or less; unsecured commercial paper issued with original term to maturity of one year or less; asset-backed commercial paper (ABCP) issued with original term to maturity of one year or less; promissory notes issued with original term to maturity of one year or less; and other one-name paper with original term to maturity of one year or less. ⁹ Also referred to as bonds and notes. They include: certificates of deposit issued with original term to maturity of more than one year; unsecured medium-term notes, bonds and debentures; asset-backed debt securities with original term to maturity of more than one year; inflation-indexed and exchange rate linked bonds; straight fixed rate instruments as well as floating rate notes and other floating rate debt securities; hybrid debt securities, such as subordinated bonds and notes, perpetual debt securities, preference shares (including those that are redeemable); convertible notes and bonds prior to conversion; stapled notes and bonds; euro medium-term notes, euro notes, and eurobonds; and other long-term debt securities issued with original term to maturity of more than one year. ¹⁰ Straight fixed rate instruments include zero coupon bonds. ¹¹ Hybrids combine features of two or more different financial instruments, eg convertibles. ¹² Other could include Islamic instruments.

Table 5

Reference metadata for debt securities statistics

What are the basic regulations governing the operation of the national/domestic securities/capital market?

What is the name of the regulatory organisation(s) for the securities market?

Are there particular disclosure requirements for issuers of debt securities?

Is there a national issue calendar? Who keeps it?

What are the listing requirements for issuers of debt securities? What are the major exchanges where debt securities are traded? Are securities traded over the counter?

Are there particular registration requirements for holders of securities?

Is there a national securities numbering system? How does it relate to the International Securities Numbering system?

Which sectors are allowed to issue into the national/domestic markets: government, banks, non-bank financial institutions, non-financial corporations, non-residents?

Is there a list of permissible instruments that can be issued in the national/domestic market, including asset-backed securities and collateralised debt obligations?

What currency can be used for issuance in national/domestic markets: local currency, foreign currencies?

Are there exemptions or special provisions in national regulations for “international” securities issues? Is there recognition of the International Capital Markets Association as a self-regulatory organisation for the international segment of national market?

Can/do residents issue securities abroad? In domestic and foreign currency? What data sources are available to measure this?

Can/do non-residents hold domestic securities? What data are available to measure this?

Is the domestic currency used in issues by non-residents in other national/domestic markets? What data are available to measure this?

What are the basic data sources for securities statistics?

What is/are the major central securities depository/ies for securities? What is/are the major clearing and settlement system(s) for debt securities?

Is there a security-by-security database for issues in the national/domestic market? Which one? Who operates it? Is it developed or used for statistical purposes?

Who is the official compiler/publisher of aggregate national securities statistics? What are the major relevant publications or websites?

What is the frequency with which securities statistics for your country are published?

Table 6 (cont)

Key breakdowns in holdings of debt securities

Issuers	General government		Financial corporations			Non-financial corporations	All residents	Non-residents
	Total	Of which central government	Total	Of which central bank	Of which special purpose entities			
Government								CPIS
Financial corporations/total								CPIS
Central banks								CPIS
Banks								CPIS
Institutional investors								CPIS
Special purpose entities								CPIS
Non-financial corporations								CPIS
Households								CPIS
All residents								CPIS
Non-residents	CPIS*	CPIS*	CPIS*	CPIS*	CPIS*	CPIS*	CPIS*	CPIS

CPIS: Coordinated portfolio investment survey.

CPIS*: Mirror view of the coordinated portfolio investment survey.

Table 7

Representation of a security-by-security database

