

# Handbook on Securities Statistics

## Communication by the Working Group on Securities Databases

### Summary

Recommendation 7 of the G20 Data Gaps Initiative, related to securities statistics, comprised three main elements:

1. an invitation for the G20 economies to participate in the BIS data collection exercise;
2. the development of the BIS-ECB-IMF *Handbook on Securities Statistics* (the Handbook); and
3. the development and implementation by the Working Group on Securities Statistics of a communication strategy for the Handbook.

This recommendation is considered completed. All G20 economies participate, to various degrees, in the BIS data collection, and the Handbook is now being published. This process has already improved the quality, comparability and availability of securities statistics. However, further efforts are still needed to ensure full consistency of securities statistics with the Handbook.

This Communication document takes stock of the coverage of securities statistics currently collected and compiled by international organisations. It briefly describes the reports and the methodologies currently applied by securities statistics compilers.

Users of securities statistics will also benefit from such information. They will find some guidance on how to combine various data sets to estimate those that are missing or on how to produce best estimates for some of the breakdowns recommended by international organisations.

The successful completion of Recommendation 7 contributes to a number of other recommendations of the G20 Data Gaps Initiative that are also related, at least partially, to the development of securities statistics.

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## Introduction

Recommendation 7 of the report by the IMF and FSB to the Group of Twenty (G20)<sup>1</sup> states:

Central banks and, where relevant, statistical offices, particularly those of the G-20 economies, to participate in the BIS data collection on securities and contribute to the further development of the BIS-ECB-IMF *Handbook on Securities Statistics (Handbook)*. The Working Group on Securities Databases to develop and implement a communications strategy for the *Handbook*.

This document describes the current status of collecting and compiling securities statistics based on the Handbook drafted and published by the Working Group on Securities Databases (WGSD).<sup>2</sup> It builds on a number of follow-up actions that have been taken since 2009 to address Recommendation 7, in particular:

- Discussions within the WGSD and with the various agencies that participate in its Technical and Review Groups.
- Consultations with senior officials from the G20 economies regarding Recommendation 7 and related recommendations, in particular Recommendation 15 regarding sectoral accounts.
- Progress reports on the recommendations of the G20 Data Gaps Initiative (DGI).
- Bilateral consultations by staff of the IMF with individual G20 countries in 2010, 2011, 2013 and 2014.
- Regional conferences organised by the IMF in early 2012 to review progress on implementation of the recommendations.
- Annual FSB/IMF Senior Officials Conferences from 2009 to 2014 to assess progress and discuss next steps on the G20 DGI.
- Improvements to data collection exercises at the BIS and the ECB involving securities statistics.
- The Committee on the Global Financial System, which originally sponsored the BIS data collection exercise on securities statistics, was consulted in the preparation of the 2012 revision of BIS securities statistics.

This document is primarily targeted at compilers of national securities statistics. It is structured as follows. First, developments with respect to the Handbook are explained. The following section looks at the improvements, either implemented or planned, to the BIS, ECB and IMF securities statistics. This section also provides a clear link between the tables published by the three international organisations and the Handbook's presentation tables with their recommended breakdowns. The following statistics on securities are described: (i) the BIS securities issues statistics; (ii) the IMF Coordinated Portfolio Investment Survey (CPIS) and Standards for Data Dissemination (SDDS) Plus; and (iii) the euro area securities statistics. The last section

<sup>1</sup> Available at [www.imf.org/external/np/g20/pdf/102909.pdf](http://www.imf.org/external/np/g20/pdf/102909.pdf).

<sup>2</sup> The group summarises the current activities and links to the documents on its website: [www.imf.org/external/np/sta/wgSD/](http://www.imf.org/external/np/sta/wgSD/). The core members of the WGSD are the Bank for International Settlements (BIS), the European Central Bank (ECB) (chair) and the International Monetary Fund (IMF). Selected experts from national central banks and other international organisations also support the WGSD's work.

links the securities statistics to the implementation of G20 DGI's Recommendation 15 and Recommendation 20. Appendix provides a description of the ECB's security-by-security database on issues and holdings of debt and equity securities.

## Developments with respect to the Handbook

The concepts and definitions in the Handbook are based on the *System of National Accounts, 2008* (2008 SNA), the IMF's *Balance of Payments and International Investment Position Manual, 6th edition* (BPM6) and other handbooks and manuals released by the IMF and other international organisations. The Handbook focuses on the issuance and holdings of debt and equity securities.

The Handbook was produced in four steps:

1. Part 1, published in May 2009, provides a conceptual framework, including presentation tables, for compiling and disseminating statistics on debt securities issues. It was designed to encourage national and international statistical agencies to compile consistent and comparable debt securities issues data.<sup>3</sup>
2. Part 2, published in September 2010, relates to statistics on debt securities holdings.<sup>4</sup>
3. Part 3 was published in November 2012 and covers issues and holdings of equity securities.<sup>5</sup>
4. The three parts of the Handbook have been merged into a single volume that is being published together with this document in early 2015.

The Handbook is a unique source for data compilers and users of securities statistics, regardless of whether they are interested in specific groups of financial instruments (debt or equity securities) or in their presentations as balance sheet items (financial assets – holdings, or liabilities – issuance) or related financial flows by institutional sector.

The WGSD uses its website to publicise its work. Press statements alerted the public at large of the release of the various parts and the single volume of the Handbook. WGSD members have also made presentations on the Handbook and its implementation at international meetings, seminars and workshops.<sup>6</sup>

The publication of the various parts of the Handbook has already increased the availability and quality of national statistics on securities issues and holdings.

Of particular note are data on debt securities issues. Some specific data sets are published by central banks and national statistical offices, typically for general government and financial institutions. This information is obtained directly from the entities issuing debt securities, as well as various commercial or institutional sources, including stock exchanges, central securities depositories, securities settlement

<sup>3</sup> Part 1 is available at [www.imf.org/external/np/sta/wgsd/pdf/051309.pdf](http://www.imf.org/external/np/sta/wgsd/pdf/051309.pdf).

<sup>4</sup> Part 2 is available at [www.imf.org/external/np/sta/wgsd/pdf/090710.pdf](http://www.imf.org/external/np/sta/wgsd/pdf/090710.pdf).

<sup>5</sup> Part 3 is available at [www.imf.org/external/np/sta/wgsd/pdf/112812.pdf](http://www.imf.org/external/np/sta/wgsd/pdf/112812.pdf).

<sup>6</sup> For a list of these events, see [www.imf.org/external/np/sta/wgsd/recent.htm](http://www.imf.org/external/np/sta/wgsd/recent.htm).

systems and custodians. Many of these national sources lack comparability because of different classification procedures<sup>7</sup> or accounting and valuation rules.<sup>8</sup>

The BIS and the ECB have launched initiatives to improve their existing data collections on securities. Efforts have been made to distil from the various sources a more consistent set of aggregate statistics that follow the concepts, definitions and presentation tables provided by the Handbook.<sup>9</sup>

It is foreseen to develop a specific Data Structure Definition (DSD) for securities statistics to facilitate the exchange and dissemination of data on securities using SDMX. Work on this task will start after finalisation of the high-level DSDs for national accounts and balance of payment statistics, which have now been made publicly available. The DSD for securities statistics will draw as much as possible on the dimension and code structures described in the 2008 SNA and the BPM6 with respect to sector and instrument classifications. It will extend these dimensions to cover specific aspects of securities statistics in more detail (eg it will include additional dimensions like classifications by remaining maturity or type of interest rate).

Finally, it should be noted that the Handbook provides a detailed description of the usefulness of security-by-security databases for developing and implementing better statistics on securities issues and holdings. This is further elaborated in Appendix 1.

The remaining sub-sections describe BIS, ECB and IMF statistics related to both securities issues and securities holdings.

## Securities issues statistics

Since the late 1980s, the BIS has published statistics on primary markets for debt securities, ie on issues of debt securities by borrowers as distinct from holdings of debt securities by different types of investors.

The euro area securities issues statistics are currently compiled monthly by Eurosystem statisticians at the ECB and national central banks, in accordance with the principle of decentralisation as part of the commonly agreed framework for producing statistics. The ECB provides euro area securities issues statistics, while the individual Member States disseminate the national data sets.

The remainder of this section describes the available securities statistics data sets, their recent revisions and the link between the publication tables and the breakdowns recommended in the Handbook.

<sup>7</sup> While the 2008 SNA classifies central banks as part of the financial corporations sector, some specific statistics combine it with general government. In addition, the classification of public financial and non-financial corporations that rely on the federal budget for partial financing is typically not streamlined across various data sets.

<sup>8</sup> Debt securities held can be valued at both nominal and market values, depending on their role in economic units' balance sheets (ie trading vs banking book).

<sup>9</sup> Issuance statistics in case of the BIS and both issuance and holdings statistics in case of the ECB.

## The data sets

The first step in developing the BIS securities statistics was to compile data on international debt securities (IDS). These data are collected from market sources and compiled by the BIS, which ensures full comparability of the data across countries and regions.

The BIS also maintains a data set on domestic debt securities (DDS), mainly to monitor the development of domestic capital markets in emerging market economies. Unlike the IDS, this data set is based on aggregated data sources.

In response to numerous requests by users of its statistics, the BIS has introduced a third data set, total debt securities (TDS). This new data set covers securities issued on any market and is exclusively based on data provided by reporting central banks. Box 1 contains details about the revision of the BIS securities statistics.

The euro area securities issues statistics cover data on issues of debt securities and of quoted (listed) shares by euro area residents. The statistics refer to outstanding amounts (stocks), transactions (separately identifying gross issuance, redemptions and net issuance) and growth rates, by economic sector of the issuer. For debt securities, breakdowns by currency and original maturity are available; breakdowns by coupon type are also available for long-term debt securities. Both seasonally adjusted and unadjusted series are published.

The statistical data, disseminated monthly, are accompanied by a press release and simultaneously published on the web. The national breakdowns with the outstanding amounts and transactions of euro-denominated debt securities, as well as quoted shares, are made available. Further detailed national information can also be obtained by contacting the respective national central bank. The statistics are published six weeks after the reference period.

The compilation of securities issues statistics is currently being reviewed, with a particular focus on making enhanced use of the Centralised Securities Database (CSDB).

The IMF SDDS Plus prescribe the dissemination of quarterly debt securities data within four months, covering holdings (stocks only) of debt securities by issuer and holder on a from-whom-to-whom basis, as shown in Table 4.2 of the SDDS Plus *Guide for Adherents and Users*.<sup>10</sup> In this context, the SDDS Plus prescribe dissemination of debt securities data for the following sectors: (i) non-financial corporations; (ii) financial corporations; (iii) general government; (iv) households and non-profit institutions serving households; and (v) non-residents.

The next section provides details about the international organisations' securities statistics publication tables and their link to the recommended breakdowns defined by the Handbook.

<sup>10</sup> Available at [www.imf.org/external/pubs/ft/sdds/guide/plus/2013/sddsplus13.pdf](http://www.imf.org/external/pubs/ft/sdds/guide/plus/2013/sddsplus13.pdf).

## Revision of the BIS securities statistics

The December 2012 revision of the securities statistics brought their methodology in line with the Handbook.

International debt securities (IDS) have been redefined as securities issued by non-residents, on either foreign markets (eg issues placed in markets of other countries) or international markets (eg eurobonds and euronotes).<sup>①</sup> The domestic debt securities (DDS) data set was previously based on publicly available data sources that frequently covered securities issued on any market, leading to overlaps with the IDS statistics and questionable comparability across countries (eg different valuation principles, different national classification of issuers). DDS statistics are now sourced from the data provided by reporting central banks, based on the Handbook's recommended methodology, and cover securities issued on the domestic market in any currency. And the new total debt securities (TDS) data set covers all securities issued by residents of a certain economy regardless of the market of issue.

In terms of published data, all of the previously available IDS and DDS breakdowns are still maintained, albeit based on the definitions from the Handbook (see Table 1). Coverage of IDS dissemination tables is expanded by specific BIS needs. While the concept of issuer's nationality (country of residence of the issuer's ultimate owner) is not covered by the Handbook, the BIS still publishes all IDS breakdowns from both residence and nationality perspectives. The only classification mentioned in the Handbook but not yet covered by the BIS statistics is the one by rating of securities. The reason for this is the very limited availability of such data in the commercial data sources used by the BIS.<sup>②</sup> In addition, coverage of financial special purpose vehicles is not yet comprehensive in the BIS securities database and not requested in reports provided by national authorities: as a result, items on securitisation cannot be provided to the general public.<sup>③</sup>

For reasons of comparability, the DDS by remaining maturity were replaced by DDS by original maturity. Also, both the TDS and DDS data provide only high-level sectoral breakdowns (general government, financial corporations and non-financial corporations). Dissemination will be expanded incrementally, as reporting national authorities provide more data with additional breakdowns. For the euro area, it is foreseen that the ECB will continue compiling the data on debt securities issued by residents of euro area countries. These data will continue to be part of the BIS statistics on securities issued on all markets.<sup>④</sup>

<sup>①</sup> For details, see B Gruić and P Wooldridge, "Enhancements to the BIS debt securities statistics", *BIS Quarterly Review*, December 2012, [www.bis.org/publ/qtrpdf/r\\_qt1212h.htm](http://www.bis.org/publ/qtrpdf/r_qt1212h.htm). <sup>②</sup> It is also worth noting that while the Handbook does not recommend any table with this breakdown, it discusses classification of securities by default risk in Section 7. <sup>③</sup> The ECB and euro area national central banks provide aggregated balance sheets of euro area financial vehicle corporations, with securities issued by these corporations available on the liabilities side of the balance sheet. Available at [www.ecb.europa.eu/stats/money/fvc/html/index.en.html](http://www.ecb.europa.eu/stats/money/fvc/html/index.en.html). <sup>④</sup> The ECB provides debt securities issues statistics for the euro area member states, including national contributions, at [www.ecb.europa.eu/stats/money/securities/debt/html/index.en.html](http://www.ecb.europa.eu/stats/money/securities/debt/html/index.en.html).

## Publication tables and the Handbook's presentation tables

The Handbook recommends presentation tables with standard breakdowns for securities issues and holdings statistics. The main idea of these breakdowns is to provide different views on the data by combining two or more classification criteria with breakdowns for both the financial instrument and the issuer sector.

The BIS publication tables are compatible with the Handbook's recommendations. The Handbook mainly focuses on the classification of issuers by sector, combined with selected securities' characteristics, eg original maturity, remaining maturity, currency of denomination, type of interest rate and market of issue.

The BIS tables C1 (all countries) and C3 (individual country) provide the data by market of issue (domestic (DDS), international (IDS) and all markets(TDS)), sector of issuer or of issuer's owner (general government, banks, other financial corporations, non-financial corporations and international organisations), maturity of securities (both original and remaining), interest rate type (all and fixed rate), and currency of denomination (US dollar, euro, domestic currency and all other currencies) for both residence and nationality of issuer.<sup>11</sup> Besides outstanding amounts, table C3 provides the flow data (i.e. gross and net issuance.) Table C2 (selected countries) provides additional data about securities issued by central government. It covers outstanding amounts by type of interest rate and average maturities.

Unlike IDS, DDS are not available from both residence and nationality perspective because, as mentioned above, nationality is a specific BIS view not supported by international standards, and reporting central banks do not classify their securities issues statistics according to this concept. DDS provide a breakdown of outstanding amounts and exchange rate-adjusted changes<sup>12</sup> by country of residence and high-level sector of issuer (general government, financial corporations and non-financial corporations). TDS provide outstanding amounts for securities issued on any market by issuing sectors resident in selected economies. See Table 1 for a link between the BIS publication tables and the breakdowns recommended by the Handbook.<sup>13</sup>

<sup>11</sup> To identify the market of issue, the BIS considers three characteristics of each security: the registration domain (ISIN), listing place and governing law. The country information associated with each of these characteristics is compared with the country of residence of the issuer. If at least one characteristic is different from the residence, then the BIS classifies the issue as an international debt security. Where available information is inconclusive, the BIS classifies the issue as international (the significant degree of uncertainty involved in processing this granular information is discussed in Gruić and Wooldridge (2012). This includes securities for which governing laws or listing places differ depending on the data source, as well as ones that the data provider has flagged as international.

<sup>12</sup> These net changes are derived by the BIS based on the assumption that DDS are denominated in domestic currency. While this assumption cannot be safely recommended to all countries, it applies to all major markets, including most significant emerging market economies. This methodology will be fine-tuned as soon as central banks provide additional breakdowns by currency of denomination.

<sup>13</sup> Some reporting countries are already providing all the recommended breakdowns. However, these cannot be provided to the general public until the coverage of global aggregates reaches a certain significant level. They are available on the BIS Data Bank only to reporting central banks. For this reason, the BIS publishes additional breakdowns only for international debt securities.



## Debt securities issues classified by issuer and securities characteristics

BIS publication tables<sup>1</sup> and Handbook-recommended breakdowns<sup>2</sup>

Table 1

| Securities  | Issuer | Residents ( <i>nationals</i> ) |                                 |                            |  | General government | All residents ( <i>nationals</i> ) |
|---|--------|--------------------------------|---------------------------------|----------------------------|--|--------------------|------------------------------------|
|   |        | Non-financial corporations     | Financial corporations<br>Total | Of which:<br>Central banks | Of which:<br>Deposit-taking corporations |                    |                                    |
| All markets   | C1, C3 | C1, C3                         |                                 | C3                         | C1, C3                                   | C1, C3             |                                    |
| Domestic market   | C1, C3 | C1, C3                         |                                 | C3                         | C1, C3                                   | C2                 |                                    |
| International markets   | C1, C3 | C1, C3                         |                                 | C3                         | C1, C3                                   |                    |                                    |
| All maturities  | C1, C3 | C1, C3                         |                                 | C3                         | C1, C3                                   | C1, C3             |                                    |
| Short-term at original maturity   | C3     | C3                             |                                 | C3                         | C3                                       |                    |                                    |
| Long-term at original maturity  | C3     | C3                             |                                 | C3                         | C3                                       | C2                 |                                    |
| All interest rates  | C1, C3 | C1, C3                         |                                 | C1, C3                     | C1, C3                                   | C1, C3             |                                    |
| Fixed interest rates  | C3     | C3                             |                                 | C3                         | C3                                       | C2                 |                                    |
| Variable interest rate <sup>3</sup>   | C3     | C3                             |                                 | C3                         | C3                                       | C2                 |                                    |
| All currencies  | C1, C3 | C1, C3                         |                                 | C3                         | C1, C3                                   | C1, C3             |                                    |
| Domestic currency   | C3     | C3                             |                                 | C3                         | C3                                       |                    |                                    |
| Foreign currencies  | C3     | C3                             |                                 | C3                         | C3                                       | C2                 |                                    |
| Memo items:   | C3     | C3                             |                                 | C3                         | C3                                       | C3                 |                                    |
| <i>Long-term at original maturity, with a remaining maturity up to and including one year</i> |        |                                |                                 |                            |  |                    |                                    |
| <i>Securitisation debt securities</i>   |        |                                |                                 |                            |  |                    |                                    |
| <i>Flows data</i>   | C3     | C3                             |                                 | C3                         | C3                                       | C3                 |                                    |

<sup>1</sup> BIS publication tables C1, C2, and C3 cover international debt securities by both residence and nationality of issuers; domestic debt securities by residence of issuers; total debt securities by residence of issuers. Both amounts outstanding and flows data are covered (gross and net flows for IDS, and exchange adjusted net changes for DDS.) <sup>2</sup> This table contains various Handbook-recommended breakdowns and links them with the BIS data sets covering domestic, international and all markets (as recommended by Handbook Table 9.2), but is not as exhaustive as the Handbook (it does not contain detailed breakdowns like maturity buckets in Handbook Table 9.4, sub-categories of variable interest rate in Handbook Table 9.5, or domestic/foreign currency breakdown as in Handbook Table 9.3.) <sup>3</sup> Variable interest rate can be calculated as residual in table C3. In table C2, there are additional items that provide data on inflation-linked and exchange rate-linked securities.

It is worth noting that the country coverage of the three data sets (IDS, DDS and TDS) is not the same. While the IDS data covered 153 economies at end-September 2015, DDS and TDS covered 33 and 41, respectively. Only a few economies are covered by all three data sets. The differences in country coverage are due to the availability of data reported by central banks (some have chosen to provide only TDS, others only DDS and both only in a few cases) and the BIS decision not to estimate and release in publication tables any series outside the IDS (which are compiled from the internal security-by-security database, as explained above).

As previously noted, expanded coverage of national aggregates would enhance the usability of publicly available data sets. Both the estimation of the size of global markets and the currency breakdown (see next section) would be significantly improved if additional breakdowns, like fine-tuned sector breakdown or the currency breakdown, reached significant coverage of the global aggregate.

Monthly data on euro area securities issues statistics as released by the ECB are shown in various presentation tables for debt securities and equity securities.

Debt securities issues are further broken down by currency denomination (“euro denominations” and “other currencies”), original maturity (short- and long-term) and sector. Table 2 shows the breakdown of the economy into eight sectors.

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### Sectoral breakdown as applied for the securities issues statistics of the Eurosystem

Table 2

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|                                      |                                     |  |
|--------------------------------------|-------------------------------------|--|
| Total economy                        | Monetary financial institutions     | ECB/national central banks (S.121)<br>Other monetary financial institutions (S.122)  |
|                                      | Non-monetary financial institutions | Other financial intermediaries (S.123) and financial auxiliaries (S.124)<br>Insurance corporations and pension funds (S.125) |
|                                      | Non-financial corporations          | Non-financial corporations (S.11)  |
|                                      | General government                  | Central government (S.1311)<br>State government (S.1312) and local government (S.1313)<br>Social security funds (S.1314)     |
| International organisations (S.2000) |                                     |  |

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ESA codes in brackets.

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Data on both stocks and transactions are provided. Stocks refer to outstanding amounts and transactions to gross issuance, redemptions and net issuance. For long-term debt securities, statistics are available separately for fixed and variable coupon debt securities. Finally, statistics on all non-euro area residents’ debt securities issued in euros are received from the BIS. The growth rates and seasonally adjusted statistics for debt securities are available for the individual breakdowns where relevant.

Data on quoted shares are broken down into data on stocks and on transactions covering four sectors and the corresponding growth rates.<sup>14</sup> Table 3 provides an overview of the tables published in the *ECB Monthly Bulletin*.

<sup>14</sup> Available at [www.ecb.europa.eu/stats/money/securities/html/index.en.html](http://www.ecb.europa.eu/stats/money/securities/html/index.en.html).

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Overview of *ECB Monthly Bulletin* tables

Table 3

| Debt securities issued by euro area residents |           |          |             | Quoted shares issued by euro area residents |
|---|-----------|----------|-------------|---|
| Stock and flows                               |           |          |             | Stock and flows                             |
| Currency                                      | Sector    | Maturity | Coupon type | Sector                                      |
| In euros                                      | 8 sectors | 2 bands  | 2 types     | 4 sectors                                   |
| In other currencies                           | 8 sectors | 2 bands  | 2 types     |   |
| Totals  | 8 sectors | 2 bands  | 2 types     |   |
| In euros                                      | 8 sectors | 2 bands  | 2 types     |   |

The ECB's annual Financial Markets Survey (FMS) collects financial market data (market size and activities) on securities for non-euro area European Union (EU) countries. The combination of the euro area securities issues statistics and the FMS makes it possible to analyse the structure of the securities market within the EU. Non-euro area EU national central banks provide the ECB with statistics on outstanding amounts and gross issues of debt and equity securities on an annual basis. These national data (presented in euros as well as in domestic currencies) give an indication of how financial and non-financial sectors within an economy are seeking direct finance on the securities market.

Aggregating the securities issues statistics for euro area countries and the FMS allows for the compilation of EU aggregates of short-term and long-term debt securities issued for various subsector breakdowns including monetary financial institutions, other financial institutions and non-financial corporations. In the same way, it also allows for the compilation of an EU aggregate for equity securities issued.

National data as well as aggregates for the euro area and the EU may be accessed in the ECB's Statistical Data Warehouse.

The IMF's Coordinated Portfolio Investment Survey (CPIS) releases 16 tables for individual economies and total participating international organisations on its website.<sup>15</sup> Table 4 provides an overview of these tables.

<sup>15</sup> Available at [www.cpis.imf.org](http://www.cpis.imf.org).

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## Overview of IMF Coordinated Portfolio Investment Survey publication tables

Table 4

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|  |  |
|--|--|
| Individual Economy Data Tables   | Table 1: Reported Portfolio Investment Assets By Economy of Non-resident Issuer (core table)<br>Table 2: Currency Breakdown of Portfolio Investment Assets<br>Table 3: Reported Portfolio Investment Assets by Sector of Holder and Economy of Non-resident Issuer<br>Table 4: Reported Portfolio Investment Liabilities by Economy of Non-resident Holder<br>Table 5: Reported Portfolio Investment Assets by Sector and Economy of Non-resident Issuer<br>Table 6: Reported Portfolio Investment Assets by Sector of Holder, and Sector and Economy of Non-resident Issuer for Specified Economies<br>Table 7: Reported Portfolio Investment Assets by Economy of Non-resident Issuer: Short or Negative Positions<br>Table 8: Derived Portfolio Investment Liabilities (All Economies) by Economy of Non-resident Holder (Derived from Creditor Data) |
| Securities Held as Reserve Assets and Securities Held by International Organizations Data Tables | Table 9: Securities Held as Reserve Assets, and International Organizations' Reported Portfolio Investment Assets by Economy of Non-resident Issuer<br>Table 10: International Organizations' Portfolio Investment Liabilities by Economy of Non-resident Holder (Derived from Creditor Data)  |
| Cross-Economy Data Tables  | Table 11: Geographic Breakdown of Total Portfolio Investment Assets Global Tables<br>Table 12: Portfolio Investment Assets: Top Ten Economies by Size of Holdings<br>Table 13: Portfolio Investment Liabilities: Top Ten Economies by Size of Liabilities (Derived from Creditor Data)<br>Table 14: Geographic Breakdown of Total Portfolio Investment: Top Ten Economies by Holders and Issuers<br>Table 15: All Economies – Reported Portfolio Investment Assets<br>Table 16: All Economies – Derived Portfolio Investment Liabilities (Derived from Creditor Data)  |

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### Use of the data

Gaps in the BIS securities issues statistics for certain economies do not prevent users from estimating the missing data set. All three data sets (DDS, IDS, TDS) are based on the same methodological standards and recommendations from the Handbook.<sup>16</sup>

The missing data can be estimated by combining the two available data sets. IDS are provided for all countries, meaning they can be combined with either TDS or DDS to estimate the missing data set in a simple way:

- Missing TDS can be derived as  $DDS + IDS$

<sup>16</sup> This does not mean that BIS IDS and national IDS cannot defer. See Graph 5 in Gruić and Wooldridge (2012) for IDS differences in the initial release of the new statistics, most of which have been solved by now.

- Missing DDS can be derived as TDS – IDS

The size of global markets can also be estimated by combining reported TDS, estimated TDS (as defined above) and IDS for countries not covered by both DDS and IDS.

The currency breakdown of global amounts outstanding can also be estimated by combining the IDS (Table 13) with reported and calculated DDS and assuming that the DDS have been denominated in domestic currency.<sup>17</sup>

Securities issues statistics enable the ECB to better analyse monetary and financial issues in the euro area. Debt and equity issuance constitutes an alternative to traditional bank loans (see the February 2001 issue of the *ECB Monthly Bulletin*). Holders of financial assets view securities issued by “non-banks” as partial substitutes for bank deposits and negotiable instruments issued by banks. Securities issues statistics therefore complement monetary statistics. Over time, shifts between direct finance (through securities markets) and indirect finance (through the banking system) may affect the transmission mechanism of monetary policy, and as such shifts may change the euro area financial structure.

A sectoral breakdown of issuing activity highlights the relative importance of public and private sector demands on capital markets and helps to account for movements in market interest rates, particularly in the case of medium- to long-term maturities. Data on the outstanding amount of securities also indicate the depth of capital markets. Furthermore, information on securities issues in euros (by euro area residents and non-residents) is used to assess the role of the euro in international financial markets.

## Securities holdings statistics

The ECB securities holdings statistics (SHS) have been developed by the Eurosystem/European System of Central Banks (ESCB) and are based on Regulation ECB/2012/24 (see also Annex 2). In March 2014, the Eurosystem/ESCB started to collect SHS with end-2013 data on positions. The main reasons for collecting such data are the needs for:

- deeper analyses on the allocation of portfolios, the accumulation of wealth and the financing of euro area government units, financial corporations and non-financial corporations; and
- investigations on the interlinkages and exposures of large institutional units and groups of units.

In addition, SHS data are collected on a security-by-security (SBS) basis in order to reduce the burden on reporting agents and increase flexibility for compilers and users.

The new data set includes quarterly information on holdings of individual debt securities and shares by two types of euro area holders: institutional sectors (with the holding information aggregated by country and sector) and the largest banking

<sup>17</sup> These estimations would certainly benefit from additional breakdowns, which can be obtained by central banks, but not the general public, from the BIS Data Bank. The reason for the partial availability of the data is that in many cases aggregates would violate the confidentiality of the underlying data.

groups (available by individual group holder). The high degree of granularity of the SBS data allows for the compilation of a vast range of new indicators, with different breakdowns on both the holder and the issuer side as well as by type of security. The data are provided by the national central banks to the securities holdings database within 70 days of the end of the reference quarter. Apart from data on positions, data on transactions and accrued income will become available in the course of 2015.

The CPIS is a voluntary data collection exercise conducted under the auspices of the IMF. To participate, an economy provides data on its holdings of portfolio investment securities (data on equity and investment fund shares, long-term debt instruments and short-term debt instruments are requested separately). The survey covers end-December holdings for the period 2001–12. Beginning with data for end-June 2013, the survey also covers end-June holdings. All economies are welcome to participate.

The IMF augments the data reported in the CPIS with data from two other surveys: the Survey of Securities Held as Foreign Exchange Reserves (SEFER) and the Survey of Securities Held by International Organizations (SSIO). The SEFER provides geographic and instrument detail on securities held as reserve assets, and the SSIO provides geographic and instrument detail on securities held by international organisations. Similar to the CPIS, the SEFER is conducted semiannually starting with data for end-June 2013, whereas the SSIO is conducted annually. Data from the CPIS and SSIO surveys provide comprehensive information on holdings of portfolio investment securities and, together with data from the SEFER, the geographic detail captured in these three surveys can be used to derive estimates of portfolio investment liabilities for every economy.

## From-whom-to-whom securities statistics

From-whom-to-whom securities statistics allow for a detailed presentation of financing and financial investment via securities (debt securities and equity securities), which has a number of benefits. From a broader perspective, they allow relationships between institutional sectors and subsectors within an economy, as well as between these sectors/subsectors and non-residents (which can, in turn, be broken down by country and sector) to be analysed. Such analysis sheds light on the sectoral composition of assets and liabilities, potential strengths and vulnerabilities in portfolios, and interconnectedness and potential spillovers.

From-whom-to-whom securities statistics show who is financing whom, to what extent, with which type of security and so on. They can also be used to see, for example, on which resident sectors households or non-residents have claims represented by securities. From the perspective of issuers of debt securities, they may show the importance of securities issued by general government and held by households or by financial corporations (and their subsectors) or the significance of securities issued by general government and held by non-residents. From the perspective of issuers of equity securities, they may reveal the significance of equity securities issued by non-financial corporations and held by households or financial corporations (and their subsectors), as well as the significance of equity securities issued by resident corporations that are held by non-residents.

The presentation of securities holdings in a from-whom-to-whom framework, broken down by debtor/creditor,<sup>18</sup> is an extension of the presentation of unconsolidated securities issuance or holdings without any counterpart sector or residence information. As regards BIS statistics, such a presentation will depend on the progress achieved by national jurisdictions in compiling their statistics constituting the DDS and TDS and whether they can include information on the holders of those securities (ie their residence and/or sector). It is not foreseen to present the IDS on a from-whom-to-whom basis.

As regards the ECB, the objective is that for each type of debt or equity security (whether in terms of positions or flows), a from-whom-to-whom securities statistics will have two dimensions:

- the residence, sector or subsector of the issuer; and
- the residence, sector or subsector of the holder.

From-whom-to-whom securities statistics require tables providing breakdowns for the security, the issuer and the holder. Such tables show positions, transactions, revaluations and other changes in the volume of assets and liabilities, broken down by sector of the issuer and sector of the holder. The securities holdings statistics will provide data for the from-whom-to-whom tables for the euro area.

## Link to the implementation of the other G20 Data Gaps Initiative recommendations

The work on securities statistics (Recommendation 7) can support the work on the G20 DGI recommendations with a securities data component: Recommendations 10 and 11, on the CPIS; Recommendation 12, on international investment position (IIP) data; Recommendation 17, on government finance statistics; and Recommendation 18, on public sector debt data. The templates for government finance statistics are consistent with those developed and used in the public sector debt database. Indeed, all the common templates being developed and referred to above have instrument and sector classifications consistent with the 2008 SNA.

The centrepiece of work on national accounts (residency)-based data sets is the development of sectoral accounts (Recommendation 15).<sup>19</sup> Recommendation 7, to compile securities statistics (issues and holdings), and others, relate to Recommendation 15: these include the recommendations relating to the IIP, government finance statistics, and securities statistics. All of these recommendations will help to enhance the sectoral accounts data.

<sup>18</sup> The 2008 SNA uses the term “flow of funds” (see Chapter 27 of the 2008 SNA).

<sup>19</sup> This recommendation states that the Interagency Group on Economic and Financial Statistics (IAG), which includes all agencies represented in the Inter-Secretariat Working Group on National Accounts, should “develop a strategy to promote the compilation and dissemination of the balance sheet approach (BSA), flow of funds, and sectoral data more generally, starting with the G20 economies. Data on nonbank financial institutions should be a particular priority. The experience of the ECB and Eurostat within Europe and the OECD should be drawn upon”.

Efforts to enhance the content of the Principal Global Indicators (PGI) website refer to Recommendation 20.<sup>20</sup> Some aggregate information on securities statistics has already been included on the PGI website. With regard to Recommendation 15, annual and quarterly time series have been made available for debt securities and equity securities (quoted and unquoted shares) as stocks and financial transactions by institutional sector. For the time being, data are available for 17 OECD countries and the euro area.

In line with the 2008 SNA, the valuation of securities is recommended to be at market value; this information can usefully be complemented by data on the nominal values of liability positions of debt securities.<sup>21</sup> Definitions and concepts are currently in line with the 1993 SNA. The 2008 SNA was implemented as from 2014.

Compilation of sectoral balance sheets can be supported from both the liabilities perspective (that of the issuer: ie the BIS securities issues statistics, or the ECB securities issues statistics) and the assets perspective (that of the holder: ie the IMF SDDS Plus, or the ECB securities holdings or investment funds statistics), but depends heavily on the availability of economic units' global data (ie securities issued on any market, or securities held regardless of residence of issuers).

The BIS securities issues can be used to contribute to the derivation of national balance sheets, as explained in the section on BIS publication tables.<sup>22</sup> Certainly, the estimated size of liabilities can help to identify potential reporting gaps in national statistics for each sector of the national economy when either the compiling authority cannot successfully impose its request to all residents, or when those providing the data do not include all outstanding securities. Furthermore, to support flow statistics, gross and net issuance provided in BIS Tables 11–15 can be used in a similar way to reduce potential gaps in these statistics.

In addition, some aggregate information will be included on the PGI website, as suggested in Recommendation 20. With respect to data on securities holdings, the IMF's CPIS and SDDS Plus provide an opportunity to promote work on the Handbook and the data compiled by international organisations and national central banks.

<sup>20</sup> This recommendation states that the G20 economies should "support enhancements of the Principal Global Indicators website, and close the gaps in the availability of their national data. The IAG should consider making longer runs of historical data available".

<sup>21</sup> However, the debt securities statistics compiled by the BIS (IDS) are presented only on a face value basis.

<sup>22</sup> That is, reported TDS or estimated TDS.



## Appendix 1: The advantages of security-by-security databases

The BIS IDS statistics are compiled from an internal security-by-security (SBS) database. This enables unique identification of each security and its issuer and provides a wealth of information needed for compilation of securities statistics. The ability to mobilise detailed statistics at any time from the universe of securities stored in the BIS SBS database can be very useful for the analyses conducted not only by the BIS, but also by central banks, academics and the general public.

A key feature of the system is its granularity and the ability to distinguish at a micro level the classification of the issuer and securities: while securities can be grouped by eg currency of denomination, original or remaining maturity, or type of security, issuers can be grouped by eg residence, or residence of their owners (nationality) – and they can be further classified by their own sectors or by sectors of their owners.

Depending on how statisticians group issuers and their securities, users can assess risks associated with issuers (or the corporate groups they belong to). These statistics can also provide alternative views on the same information, as illustrated in Table 1 of this document. Work conducted at the BIS has shown the usefulness for financial stability analysis of comparing data on international debt securities by both the residence and the nationality of issuers – for instance, when assessing the international issuance of emerging market borrowers through the foreign entities they control.

As regards the ECB's experience with its SBS database, four main aspects deserve to be highlighted: the possibility to link the granular data with securities holdings statistics; the rich data content; the efficient data compilation process; and the data dissemination issues.

### *Link of security-by-security databases to securities holdings statistics*

Security-by-security databases can be linked to securities holdings statistics (SHS) for resident holders grouped by sector and subsector, as well as for non-resident holders. For that purpose, information provided by respondents is linked at the individual security level to the data stored in the SBS database. The link is often made using the ISIN, but also referring to information on the securities holders and holdings: (i) the holder by residence and institutional sector and subsector and also by large and complex financial or non-financial groups; and (ii) the amount of holdings in the given currency.

### *Data content*

As an example, the ESCB's Centralised Securities Database (CSDB) currently makes available over 70 attributes of individual securities on a monthly basis with a very short delay. They include information on issuer, type of instrument, country and institutional sector of issuer, currency of denomination, amount outstanding, coupon and dividend information, and issue and maturity dates and prices. For more specific purposes, IT tools can be used to merge the SBS data with other reference databases, allowing analysis according to many more dimensions. Table B summarises the main available breakdowns.

Two separate SHS data modules provide information on two types of investors. The SHS sector (SHSS) module gives information on the country and sector of the

holder. The SHS group (SHSG) module contains the holdings of each of the largest euro area banking groups (including the securities held by their subsidiaries and branches, both inside and outside the euro area); these banking groups are identified as important for the stability and functioning of the financial system in the euro area and/or in each euro area country.

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## Main breakdowns in the securities holdings statistics data set

Table B

| Holder data<br>Who holds? | Security data<br>What is held? | Issuer data<br>Who has issued? | Holding value<br>How much is it worth? |
|---------------------------|--------------------------------|--------------------------------|--|
| SHSS <sup>1</sup>         | ISIN                           | Issuer name                    | Positions                              |
| Sector                    | Instrument type                | Issuer sector                  | <i>Transactions</i>                    |
| Country                   | Currency                       | Issuer country                 | <i>Nominal value</i>                   |
| Sector in a country       | Maturity date                  | NACE classification            | <i>Market value</i>                    |
|                           | Market capitalisation          | Issuer MFI code                | <i>Accrued income</i>                  |
| SHSG <sup>2</sup>         | Outstanding amount             |                                |  |
| Individual banking groups | Price                          |                                |  |

Items in italics will be made available in the course of 2015.

<sup>1</sup> SHS sector data module <sup>2</sup> SHS group data module.

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### *Data compilation process*

The collection of national data is performed by the national central banks. After initial validation, the data are sent to the Securities Holdings Statistics Database (SHSDB)<sup>23</sup> within of 70 calendar days of the end of the reference quarter.<sup>24</sup>

The national data are enriched with the reference information on the securities and issuers from the CSDB. The reported data and the CSDB information are then used to calculate nominal and market values for end-of-period positions, as well as notional transactions (in case they have not been reported), other changes between opening and closing positions, and the accrued income and dividends.

The next step involves the aggregation of the SBS data in order to produce the aggregates to be verified by the compilers. Once validated, the data are disseminated to the end users.

### *Data dissemination*

Selected aggregates will be disseminated to the general public. Due to confidentiality restrictions, the granular data can only be shared with selected users within the Eurosystem.

<sup>23</sup> Developed and operated jointly by the ECB and the Deutsche Bundesbank.

<sup>24</sup> For data by individual group, this will be reduced to 55 days as from 2016.

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