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Improving the Methodological Framework for Securities Statistics

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Improving the methodological framework for securities statistics

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This note identifies some limitations with respect to statistics on domestic/local securities markets and makes a number of suggestions for improving methodological as well as data collection and dissemination arrangements in this area.

There are considerable problems in collecting relevant, timely and internationally comparable statistical information on local currency bond markets. The BIS currently collects, with some major effort, aggregated data on domestic securities issues for 48 OECD and emerging market countries. In order to complete or extend this dataset the CGFS very recently developed a number of tables, with the assistance of the BIS, which major emerging market central banks have been asked to complete. These tables cover aggregated data on the stock of corporate and government issues broken down by instrument (bonds and notes, money market instruments), sectors, maturity (original and residual), and contract type (fixed rate, floating rate, indexed and hybrid). The tables also cover data on securities holdings by residency and sector as well as on secondary market trading.

Given the increasing interest by policy makers and market analysts in monitoring developments in securities markets, it may come as a surprise that it is difficult to obtain appropriate and comparable data on domestic securities markets. One of the main reasons for this is probably the lack of an internationally accepted methodological framework for securities statistics. As described below, a number of statistical frameworks for securities statistics have been developed over time by international organisations, various private and public sector data collectors and compilers as well as users. Integrating, comparing or cross-checking these databases is a challenging task. No initiative has been taken so far at the global level to standardise, or even coordinate, the methodologies used for securities statistics.

Existing frameworks for securities statistics

The core framework for most economic and financial statistics is the framework for national accounts, in particular the area relating to financial accounts (both flows and stocks - see SNA 93 and ESA 95). The SNA provides at least three dimensions with respect to securities statistics: sectors, instruments and stocks/flows. Also, the SNA framework provides guidance on a number of topics, including valuation methods, net versus gross measures of financial stocks and flows, and reconciliations between flow and stock measures. These are essential elements of a framework for collecting and disseminating statistics on securities markets. At the same time, they are not specific and detailed enough from a perspective of data compilers and users of securities statistics.

¹ The views expressed in this note are those of the author and not necessarily those of the BIS or the Basel-based international groups.

The “Rest of the World” dimension of the financial accounts (both stocks and flows) is developed further in the methodologies for International Investment Positions (IIP), External Debt, and the Coordinated Portfolio Investment Survey (CPIS). The latter, in particular, is the only systematic source so far for holdings of securities on a worldwide basis. These methodologies also cover a number of important elements related to securities statistics and an effort is made to ensure consistency with the SNA framework (eg valuation, reconciliations between flows and stocks).

More recently, a number of optional indicators on securities markets were included in the IMF Financial Soundness Indicators. These securities market indicators focus specifically on measures of market depth and tightness (eg trading spreads and turnover). Regarding more structural indicators of the importance of various financial markets, only a summary presentation is proposed to indicate the stage of development of domestic financial markets, without any guidance for precise quantitative measures.

In 2000, following a decision of the IMF Standing Committee on Balance of Payments Statistics, a task-force comprising a number of international organisations (including the BIS, IMF, ECB) as well as central banks and treasuries of a number of large financial centres (US, Japan, UK, Germany) discussed the merit of establishing, over time, a global centralised securities-by-securities database. A questionnaire was circulated to all the countries that had participated in the 1997 CPIS. The response was generally positive and supportive of the idea of developing a basic template for national securities-by-securities databases, which could gradually be developed and/or implemented by existing or new private and public sector data compilers in individual countries. These individual databases could then be shared through a central clearing house so that overlaps and duplications could be filtered out with the aim of obtaining a global database from which reliable aggregate data could be produced with every possible breakdown users and analysts might want. Further reflection on this proposal was put on hold until experience could be gained with the building of the Central Securities Data Base by the ECB (see below).

In line with growing interest in securities market data by both market participants and policy makers, various public or private databases and statistics have been developed covering individual countries as well as international securities markets. Reflecting the varying needs of users of this data, the databases differ significantly in terms of scope, timeliness, accuracy and comparability. A massive amount of price data is, for instance, collected and provided by stock exchanges, specialised data brokers and even individual financial institutions for individual securities.² More aggregate data on securities issues are available from stock exchanges, central securities depositories, clearing houses or statistical functions of public sector agencies (in particular Ministries of Finance for government bond issues, and central banks). Most of these aggregate data have breakdowns by sector, instrument, currency and maturity (typically original maturity). Information on securities markets is generally provided on a stock basis. There is much less easily accessible information on the volume of new issues and redemptions. Neither is there much information readily available from these sources on the breakdown by rating category or by type of contract (eg MBS, ABS, CDO's, fixed-rate versus floating rate). Each country has its own market idiosyncrasies and reporting framework, which means that the available information is rather difficult to compare internationally.

These various public and private sector databases have been the source of the BIS securities statistics. As the international securities markets developed rapidly during the

² The principal commercial value of securities-by-securities databases is not to get a statistical overview of the aggregate structure of securities markets but to feed price data to trading and risk management systems of financial institutions.

1980s and became a significant alternative channel for financial intermediation to more traditional cross-border banking, the BIS started to purchase a number of commercial databases and to collect data from international central securities depositories in order to be able to monitor international securities issuance.³ Various features of individual securities issues contained in these databases are analysed in order to subtract so-called international securities from these databases.⁴ More recently the BIS has started to compile data on domestic securities issues in a number of countries using aggregate data that it could find from various national sources.⁵ One of the problems of this compilation exercise is that it cannot rely on a standardised methodological framework. Both for its international and domestic securities the BIS tries to provide breakdowns by residency and sector of the issuer, currency, instrument, and maturity. More information on the BIS securities statistics is provided in the Guide to the International Financial Statistics (BIS Paper 14, February 2003). The BIS securities statistics are published in the BIS Quarterly Review.

At the European level, the establishment of a monetary union at the end of the 1990s created the need for quality data on securities markets, for both monetary and financial stability analysis. Recognising that there was no satisfactory international methodological framework for securities statistics, the ECB, together with euro area central banks, developed a reporting framework for securities statistics for the euro area. A so-called short-term approach was taken based on already existing data at national and international level. The objective was to obtain aggregated information of all issues by euro area residents in all currencies as well as all issues of euro-denominated debt securities worldwide. The exercise was started in 1999 and has resulted in the development of a so-called SEC database at the ECB.⁶ On the basis of the information thus collected, the ECB has been in a position to publish monthly statistics on euro area securities issues since November 1999. At the same time of the release of the euro area aggregated data, national central banks publish their respective national data.

Much more detailed data on euro area securities issues is expected to become available from the ECB's Central 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 which euro area residents are likely to hold or transact in. This is done by assembling data about individual securities issues from disparate sources, cleaning it up, and in the future possibly incorporating all available information about holders. During a first phase, completed in April 2005, the ECB implemented a "slim" version of the CSDB using an initial set of data. During

³ The development of the BIS international securities statistics was based on the recommendations contained in the 1986 Report of a Study Group established by the Central Banks of the Group of Ten Countries on Recent Innovations in International Banking (the so-called Cross Report).

⁴ For the purpose of its analysis and in line with the methodology for its international banking statistics, the BIS defines international securities issues as all foreign currency issues by residents and non-residents in a given country and all domestic currency issues launched in the domestic market by non-residents. In addition, domestic currency issues launched in the domestic market by residents are also considered as international issues if they are specifically targeted at non-resident investors. The definition is not always easy to implement in practice and over time the distinction between international and domestic issues has become increasingly tenuous.

⁵ In a few cases national securities-by-securities data is available. It should be noted that the BIS definition of domestic issues may differ from national sources as it deducts from total securities issued in a particular jurisdiction (often referred to as domestic issues in national sources) the aggregate international securities for that country obtained from the BIS international securities issues.

⁶ The methodology for the securities statistics conform to the ESA 95 whenever appropriate and possible. Issues are reported at nominal value. Gross issues and redemptions are reported as well as net issues and amounts outstanding.

the current second phase the coverage will be expanded with the aim of starting to use the CSDB for regular statistical purposes. A third 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, both from a methodological and 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, BIS and a few statistical offices. Other problems were related to the availability of human, financial and IT resources. Finally, there are still remaining data quality issues regarding the misclassification of issuers, prices, missing securities and erroneous links between issuers and securities. The BIS has been, and continues to be, actively involved in the design and 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 quality checking of the CSDB. Finally, it has obtained a copy of the CSDB for its own internal use.

Possible improvements in securities statistics

There is little doubt that users and compilers would benefit from a more coherent international methodological framework for securities statistics. The various relevant international organisations, in particular the BIS, ECB and IMF, would be well placed to work together, and with national experts, to develop such a framework. The intention would be to build on the expertise of the various initiatives and frameworks that have been taken and developed so far and to come up with a coherent methodological framework that would be consistent with other international statistical standards (in particular the SNA, BOP, IIP, External Debt, CPIS and FSI). Amongst others, the framework would define the key breakdowns that would be useful to have and ensure a consistency between flow and stock data.

A second, related but somewhat separate, initiative could be to analyse in more detail the benefits and costs of securities-by-securities statistics and to develop best practices or guidelines for such databases. This issue was already discussed at the workshop co-sponsored by the Bank of Canada and the IFC in June 2005 on the topic of "Data Requirements for Analysing the Stability and Vulnerability of Mature Financial Systems". Since then a number of central banks outside the euro area, including the Bank of Canada, have taken a more active interest in developing domestic securities-by-securities databases. There would clearly be a benefit to share experiences from the ECB project more broadly and to ensure that national frameworks for securities-by-securities databases would be internationally compatible. The three international organisations mentioned above, also in cooperation with national experts, might again be the natural candidates to take this work forward.⁷

Apart from developing methodologies and guidance mentioned above, it would be useful if central banks, in particular those which are members of the CGFS and/or participants in the BIS Data Bank, could assist the BIS in collecting available public data on domestic securities issues and making them available on a regular basis through the BIS Data Bank.⁸ If necessary, the code structure in the Data Bank could be further expanded. Through the Data

⁷ One consideration could be to integrate the work on an international methodological framework for securities statistics with that on securities-by-securities databases. Alternatively the work could be sequenced by starting with the more general framework first. For both exercises it may also be useful to consider the development of proper data and metadata structure definitions on the basis of the SDMX standards.

⁸ The BIS has recently worked with the ECB and the national euro area central banks in order to obtain a copy of the SEC database for internal purposes (eg to compare the data with its current domestic securities of the euro area countries).

Bank, the data would also be made available to other participating central banks in electronic format. It could also be used by the BIS to improve its international financial statistics.

It should be noted that the suggestions made in this note **do not necessitate any new data reporting system**. Indeed, both the development of a proper international methodological framework for aggregate securities statistics as well as for securities-by-securities databases can be based on available experience and data. Guidance on securities-by-securities statistics would also not imply that there would be an obligation or recommendation that countries develop such databases. Similarly, the collection and sharing of domestic securities statistics with the BIS could be done on the basis of existing data, though hopefully over time the comparability of the national data would be enhanced by the development of a recognised international methodological framework.

The ultimate objective of the proposed improvements in securities statistics should be to ensure that policy makers, market participants and analysts obtain a better, more consistent and internationally comparable set of data on securities markets without increasing the overall reporting burden and cost to data compilers.

The Council of the Irving Fisher Committee on Central Bank Statistics discussed this note at its meeting on 29 August 2006 and agreed to keep the issue of securities statistics on its agenda. The IFC Executive will be discussing in the near future how the IFC could contribute to improving the methodological framework for securities statistics.