

# Debt securities statistics: the Bank of Thailand's experience<sup>1</sup>

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## Significant role of debt securities on the Thai economy

Prior to the 1997 financial crisis, most capital mobilization through debt security issuance in Thailand was undertaken by the public sector. The private corporate sector, at that time, had greatly relied on market borrowings from financial institutions (both domestic and foreign) to fulfill their financing needs. The aftermath of the crisis called for development of the debt security market to become a fund-raising alternative for the private sector. Many major policy measures were undertaken to resolve obstacles and also to create the necessary infrastructure for the development of the Thai bond market. Meanwhile, the Office of the Securities and Exchange Commission, the Stock Exchange of Thailand, the Thai Bond Market association, the Bank of Thailand (BOT), and the Ministry of Finance (MOF) deemed it necessary to issue bonds in a more consistent and active manner so as to create benchmark rates for private issuers. These concerted efforts have since significantly strengthened the role of capital raised through debt securities issuance. This paper outlines the data issues involved in debt securities statistics in Thailand and relates the BOT's experience with building a security-by-security database.

## Debt securities statistics in Thailand: major characteristics and data sources

Since the collection system of statistical data in Thailand is decentralized, there is no single entity that monitors or compiles a comprehensive national database on debt securities that the BOT could utilize. Each compiling agency collects and compiles securities data to serve only their own needs and interests. Those agencies are:

- 1. Public Debt Management Office (PDMO):** The PDMO is established under the umbrella of the MOF. The scope of its responsibility includes public debt and liability management (including guaranteeing the debt of state enterprises). In terms of debt securities, the PDMO functions as the official information center for public debt securities issued by the government and state enterprises, covering bonds, promissory notes and treasury bills. Information collected include data on new issuance (both domestic and offshore), redemptions, interest payment, outstanding amount, maturity date, etc.
- 2. Bank of Thailand (BOT):** The BOT serves as an official registrar for public debt securities: treasury bills, government bonds, Bank of Thailand bonds, Financial Institutions Development Fund's (FIDF) bonds, and some other state enterprise bonds. Data collected include new issuance, auction results, amount sold, redemption, interest payments and accrued interest, outstanding amount classified by holders, and registration information on a

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security-by-security basis. In addition, the BOT conducts quarterly surveys of the private sector's external debt and an annual survey of international investment position (IIP). From these surveys, the BOT has been able to obtain detail information on the private sector's debt securities outstanding amount vis-à-vis non-resident counterparties. Data can be classified by country of issuer (asset side), country of holder (liability side), institutional sector (sector of resident entity issuing or holding the securities), and term range (short-term vs long-term). In addition to debt securities, money market instruments are also obtained from the surveys: these are FRN (Floating Rate Note), FRCD (Floating Rate Certificate of Deposit), NCD (Negotiable Certificate of Deposit), P/N (Promissory Note), and B/E (Bill of Exchange), etc, denominated in both foreign currencies and in baht.

**3. Office of the Securities and Exchange Commission (SEC):** The SEC is the government authority that approves new issuance of debt securities of corporate residents, in the domestic or offshore markets. Data compiled include information on permission granted to issue new private debt securities, offered in both domestic and offshore markets, and classified by type of securities.

**4. Thai Bond Market Association (Thai BMA):** The Thai BMA is a private entity established under the Securities and Exchange Commission Act (B.E. 2535), and mandated as the sole information center for yields and prices of bonds in Thailand. Its other objectives are (1) to serve as a center for debt instrument registration following SEC approval; (2) to oversee and monitor the conduct of securities trading to ensure fairness and efficiency of the trading process; and (3) to prepare data on reference prices and yields curve for mark to market purpose. Data compiled by the Thai BMA include new issuance and outstanding amount (security-by-security), trade transactions with details of transactors, broken down into resident and non-resident groups, and further into subgroups according to the classification scheme set forth by the Thai BMA, market prices, interest rates, and details of bond profiles such as issuers, instruments and denominated currency.

**5. Thailand Security Depository (TSD):** The TSD is a subsidiary of the Stock Exchange of Thailand, and has become the sole national security depository center. It functions as (1) a depository for securities under a "scriptless" regime; (2) a "back office" for clearing and settlement operations (3) the registrar for most equity securities and some debt securities. Data compiled include outstanding amount of debt securities held at intermediary level (custodians and brokers), and is classified by group of holders (under the financial institutions sector).

**6. Custodian: Most custodians serve as intermediary in the debt market.** They perform several functions; for instance, (1) serving as a registrar and underwriter of the first issue of debt securities pertaining to private sector and some public issues (where the BOT plays no role); (2) providing custodian service for investors; and (3) serving as licensed dealers for the secondary and OTC market. Data obtained from custodians include outstanding debt of public and private sectors (security-by-security) classified by holders, issuers and instruments. Information on Thai securities held by non-residents is collected, as well as on foreign securities held by Thai investors. It should be noted that tracking the ultimate ownership of Thai securities held by non-residents through information obtained from the custodians is difficult since cross-border purchase/sale of securities is mostly recorded under the name of the intermediary rather than end investors.

With regard to the operations of all six aforementioned agencies involved with debt securities in Thailand, it could be asserted that quite substantial debt securities statistics data are available. Nonetheless, the data from each agency are collected in different formats to serve only each internal use, and do not therefore adhere to a common standard. Indeed, this calls for a central agency to oversee and establish a compilation standard to ensure that these debt securities statistics correspond to the needs of central banks and the financial community. The BOT has so far attempted to integrate and unify data, from various sources with different levels of detail, and to compile standards with the aim of creating a

comprehensive database that would enable multidimensional classification; eg by issuer (location of issue or residency of issuer), holder, residency, institutional sector, instrument, country (location of issue or residency of issuer), and currency to accommodate the BOT user requirements.

## **The Bank of Thailand: Role and demand for debt securities statistics**

The BOT needs to use debt securities statistics to accommodate their operations in four major areas.

1. The compilation of macro economic statistics in accordance with international standards and guidelines. These data include balance of payments (BOP), international investment position (IIP), external debt and monetary statistics. The BOT serves as the official compiler of these statistics along with providing data support to other compiling agencies for the purpose of constructing other macro statistics, such as items in the GFS, GDP and Flow of Funds Accounts to ensure that they conform to international standards. Debt securities statistics used for macro economic statistics compilation will feature detailed breakdown by type, currency, maturity, location of issue, residency of issuer/holder, sector of issuer/holder, etc.

2. Information for monetary policy formulation and implementation. In order to implement monetary policy efficiently through the money market, the BOT needs information for monitoring the condition of the debt securities market very closely. The BOT utilizes the data for liquidity intervention, to drain liquidity from or inject it into the financial system through the outright purchase/sale of securities or through the repo facility so as to indicate the monetary policy stance via money market rates. While aiming for financial stability, this information also contributes to enhancing and developing the debt securities market.

3. Monitoring short-term capital inflows such as investments in baht debt securities by non-resident investors.

4. Assessing financial institutions' risk exposure and financial soundness. Financial institutions are required to submit their administrative reports – in particular, information on issuers and holders of debt securities – to the BOT. Data would be used to accommodate the BOT's prudential supervision over financial institutions on a timely basis.

Despite the fact that Thailand has no comprehensive database for debt securities statistics, the BOT needs to use such data for its operations in the four areas mentioned. BOT obtains such data from other external sources; for instance, direct reports from custodian entities, survey of investors, foreign exchange records (ITRS or dataset), financial institutions' financial statements for supervision purposes, etc.

## **Comprehensive debt securities database: the BOT's initiative**

The BOT acknowledges the need to establish a comprehensive debt securities database, to serve as a central data warehouse that could fully accommodate various demands from the BOT's internal users. Once completed, the database would feature debt securities data collection in formats set forth under international standards. It would be highly flexible, with multidimensional data available to users, will eliminate any redundancy in data collection, and will be able to capture detailed information on security-by security basis.

In order to make this initiative successful, the development of such a comprehensive debt securities database would require close cooperation from relevant compiling agencies, both public and private, in order to ensure that the BOT obtain sufficient debt securities data with

a well-structured format. Nevertheless, at present there are different approaches to data collection and differing characteristics of the data obtained from external agencies, which need streamlining to make them conform with the BOT's user requirements. Over the years, the BOT has gained cooperation from compiling agencies: some are willing to prepare/provide data in the BOT's specified formats, while some will take more time and consideration to make data available to the BOT.

As for data submission channels, the BOT is developing a standard process for a data transmission channel in *DMS DA Extranet/Internet*, for easy and safe data transfer. Nevertheless, as most data providers tend to provide similar data to other external agencies as well, they would prefer to provide data via a Web Service channel. The BOT will continue to develop new alternatives to accommodate data submissions in the future.

At present, the BOT allocates a budget especially for developing the comprehensive debt securities database. The project commenced in 2005, starting with development of the basic foundation of a Central Data Warehouse (data are collected via a security-by-security approach), and is expected to be complete by 2008. The system will be designed and developed with appropriate tools to accommodate all the different needs of BOT internal users. The project is being implemented in 3 phases as follows:

**Phase 1** (2005–2006) Compilation of debt securities data of which the BOT serves as official registrar.

**Phase 2** (2007–2008) Compilation of data on Thai debt securities, equity securities and Thai financial derivatives held by resident and non-resident investors, as well as those foreign securities held by Thai investors.

**Phase 3** This future phase will encompass debt instruments in the money market, new type of debt securities, as well as data on Thai institutional investors' holdings of foreign securities.

## **Problems, concerns, and experiences related to the development of the BOT's comprehensive debt securities database**

Since 2005, the development of a comprehensive debt securities database for BOT internal use has progressed quite significantly; nevertheless, there are still some problems, concerns, and experiences that could be worth mentioning, as follows:

1. With data needs that differ among BOT internal users, a sufficient amount of time must be planned for gathering and thoroughly analyzing data requirements. This is to ensure that the process yields the proper framework and design for creating a database with sufficient data availability. Meanwhile, data redundancy would be eliminated to reduce the burden borne by data providers.

2. As sources of Thai debt securities information tend to belong to several agencies, as mentioned above, the identification of data needs with matching data sources must be well considered to ensure that the BOT obtain useful and complete information. The new work system should be able to accommodate all data and contents from various sources submitted via various channels, depending on the development of each provider's internal system.

3. A good relationship with and an understanding of compiling agencies on data compilation are crucial. Data consistency checking is a major challenge for the central compiler, since the data come from different sources. The checking is required in terms of both data definition and content, in order to ensure the accuracy and quality of data. The work system should be designed and developed to be able to perform data accuracy and

consistency checks of each data source. It is also crucial to meet the deadline of the project; we need to ensure the willingness of various data providers to synchronize with our time line.

4. The system must be developed with great flexibility that could fully accommodate new and complex financial instruments in the future.

## Conclusion

From the BOT's experience and its attempt to construct a comprehensive debt securities database, some interesting conclusions can be drawn: that Thai debt securities statistics are sufficiently available, and could be further classified into standard formats set forth by international guidelines. Nevertheless, there has been limited use of Thai debt securities data due to the lack of a national debt securities database. The BOT's recent initiative on the development of a comprehensive national debt securities database will therefore be a vital contribution not only to BOT internal use but also to the whole financial system. In addition, the BOT's experiences will serve as an example for other developing nations that are interested in developing their own national debt securities database system in future.

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