



## **Korea's Experience in Compiling Public Sector Debt Statistics**

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### **Abstract**

This paper reviews Korea's Experience in Compiling Public Sector Debt Statistics. Last year, the government began for the first time to compile and release annual public sector debt statistics with internal transactions excluded, in accordance with the standards set out in the IMF's Public Sector Debt Statistics Guide for Compilers and Users. In addition, in a bid to enhance the timeliness and reliability of public sector debt statistics, the Korean government requested that the Bank of Korea join it in compiling quarterly public sector debt statistics, since the Bank of Korea draws up the Flow of Funds statistics. The Korean government and the Bank of Korea have developed methods of compiling quarterly statistics and plan to publish quarterly public sector debt statistics in 2016. The main characteristics of their compilation methods are as follows. First, unlike annual statistics in which public sector debt is calculated based on closing balance sheets, quarterly statistics calculate public sector debt by adjusting figures from the Flow of Funds statistics. Second, in the compilation of quarterly statistics, in contrast to annual statistics, estimation methods are used as well as aggregation methods, depending upon the quantity of basic data collected. Finally, when final annual figures for the previous year are released in December each year, the preliminary figures for the current year and the previous year are adjusted retrospectively, in reflection of the final annual figures.

**Keywords:** public sector debt; Flow of Funds statistics; quarterly statistics; estimation.

### **1. Progress**

Guidelines for compiling public sector debt statistics have been prepared by international organizations in the aftermath of the Global Financial Crisis. Against this backdrop has come a growing recognition that debt statistics also need to be compiled on the home front in order to capture the financial soundness of the public sector. Accordingly, in February 2014, the government began for the first time to compile and release annual public sector debt statistics with internal transactions excluded, in accordance with the standards set out in the IMF's Public Sector Debt Statistics Guide for Compilers and Users.

In addition, in a bid to enhance the timeliness and reliability of public sector debt statistics, the Korean government requested that the Bank of Korea join it in compiling quarterly public sector debt statistics, since the Bank of Korea draws up the Flow of Funds statistics. The government and the Bank of Korea agreed to adjust debt figures in previously released Flow of Funds data in accordance with the newly adopted standards for public sector debt compilation and to release them jointly. Joint compilation and release are expected to heighten the accuracy of the statistics through cross-checking of the basic data. The IMF also recommends that individual countries release quarterly public sector debt statistics (within four months after the end of the quarter concerned) by 2019 in conformity with the revised Special Data Dissemination Standard Plus.

This paper starts out by first talking about the current status of Korea's public sector debt statistics compilation. Next we discuss Quarterly Statistics Estimation Methods developed by the Bank of Korea and our data sources.

## 2. Current Status of Korea's Public Sector Debt Statistics Compilation

Before getting down to the main details, we briefly run through the way Korea's compilation of public sector debt statistics has developed over the last few years.

Last year, the Korean government released for the first time public sector debt statistics in conformity with the PSDS Guide (Public Sector Debt Statistics Guide for Compilers and Users, IMF), which is the accepted international standard. A closing balance sheet on an accrual basis was used for the basic data and internal transactions among institutions were deducted in calculating the annual time series data from end-2011 until end-2013.

Hitherto, the government had calculated debt statistics in accordance with the IMF's 86 GFS (Government Finance Statistics) Manual, which stipulates a cash basis of recording, and, similarly, the institutional coverage could not but comply with Budgetary Central and Local Government and Extrabudgetary funds.

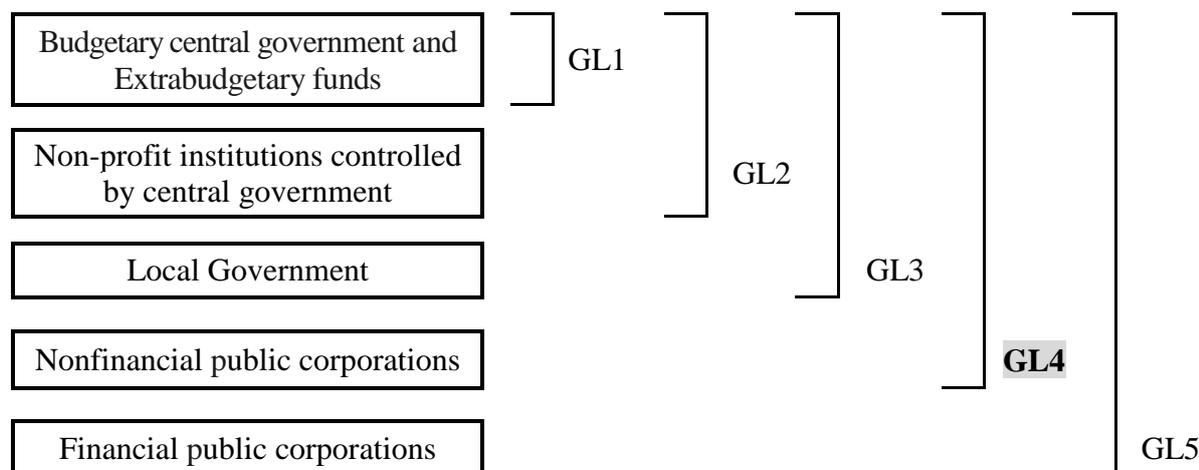
As a result, it was constantly argued in the media that the government debt figures were underestimated, and it was difficult to ensure their coherence with the System of National Accounts.

In addition, annual debt statistics being calculated based on closing balance sheets, they have the drawback that they are released one year late. Against this backdrop, in order to grasp the fiscal status at an early stage, the government established a plan for the release of quarterly statistics.

In the latter half of 2014, at the government's request, the government and the Bank of Korea decided to press ahead jointly with a plan to compile quarterly statistics using Flow of Funds statistics, and, as an initial step, completed the identification of differences in compilation methods and actual compiling practice between the Flow of Funds statistics and public sector debt statistics. After supplementing basic data and test compiling in the second half of this year, they plan to release quarterly statistics starting from next year.

The IMF<sup>1</sup> recommends GL3 as the institutional coverage for public sector debt statistics to heighten international comparability. Korea, however, currently compiles GL4 which includes not only general government, but also nonfinancial public corporations.

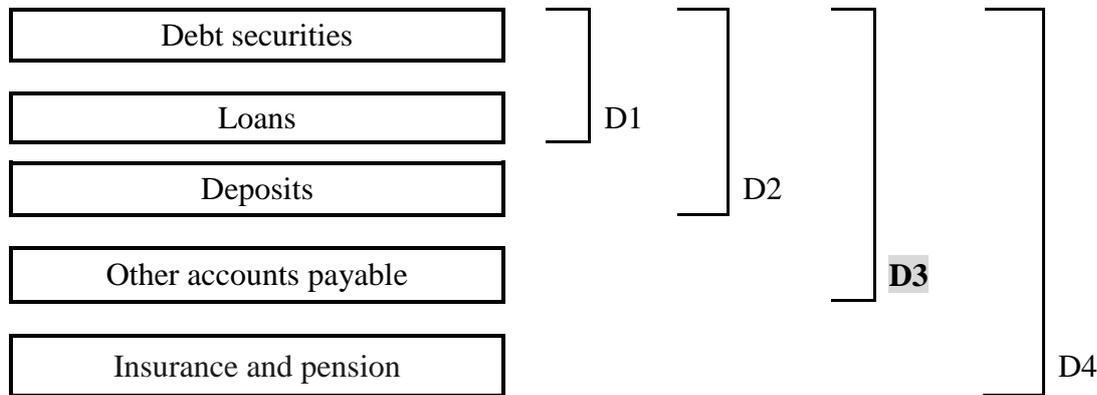
### Institutional coverage



<sup>1</sup> Dippelsman, Dziobek, and Mangas, "What lies beneath: The statistical definition of public sector debt", IMF Staff Discussion Note, 2012.

The IMF recommends D4 for instrument coverage. Korea, however, publishes D3 and disseminates pension obligations as a memorandum item separately from the public sector debt statistics.

**Instrument coverage**



### 3. Quarterly Statistics Estimation Methods

#### ① Calculation based on Flow of Funds statistics

Unlike annual statistics in which public sector debt is calculated based on closing balance sheets, quarterly statistics calculate public sector debt by adjusting figures from the Flow of Funds statistics. Quarterly statistics reflect differences between the 2008 SNA and the PSDS Guide in terms for example of internal transactions, the value of claims and the concept of liabilities.

First, internal transactions are excluded from the Flow of Funds statistics, which are a simple addition of the amounts of debt of individual institutions. Currently, the total debt amounts of 431 institutions<sup>2</sup> are added up in the Flow of Funds statistics, and internal transactions between these institutions should therefore be excluded from the statistics.

Second, the Flow of Funds statistics' values of debt securities, which are estimated at current market value, are converted into nominal values. According to the 2008 SNA, the nominal value of a debt instrument can be calculated by discounting future interest and principal payments at the existing contractual interest rate on the instrument.

In addition, as liabilities that require future payments of principal or interest are the only ones defined as debt in the public sector debt statistics, financial derivative liabilities have to be excluded from the Flow of Funds statistics.

#### ② Combination of aggregation and estimation methods

In the compilation of quarterly statistics, both aggregation and estimation methods are used, depending upon the quantity of basic data collected. As basic data on debt securities, loans and deposits can be collected through complete enumeration surveys for quarterly statistics on

<sup>2</sup> Budgetary central government(1), Extrabudgetary funds(8), Non-profit institutions controlled by central government(157), Local government(1), Local education institution (1), Non-profit institutions controlled by local government(87), Nonfinancial public corporations(176)

the Flow of Funds account, the amount of debt outstanding is calculated by aggregation of the basic data.

For other accounts payable, though, there is big difference between figures on an accrual basis and figures on a cash basis and it is difficult to get figures on an accrual basis unless an institution compiles a quarterly closing balance sheet. In fact, quarterly figures for other accounts payable are obtained by using estimation methods due to insufficient basic statistical data. For other accounts payable, since basic data taken from quarterly Flow of Funds statistics are available only for some institutions, the figures for other accounts payable are calculated by extending their final annual figure by applying the rate of change in the related basic data. However, as data on other accounts payable are not available for budgetary central and local government, they are estimated based on its trend line.

### **Comparison between Annual and Quarterly Statistics Compilation**

	Annual Statistics	Quarterly Statistics
Basic data	Closing balance sheet	Flow of Funds Statistics, More detailed surveys of internal transactions
Release schedule	December of the following year	Beginning of the second following quarter

#### Compilation methods

Debt securities, borrowings, deposits	Aggregation of relevant items in closing balance sheet	Aggregation of relevant items in Flow of Funds statistics
Other accounts payable <sup>1)</sup> of budgetary government	Aggregation of relevant items in closing balance sheet	Estimation based on trend line
Other accounts payable <sup>1)</sup> of other sectors <sup>2)</sup>	Aggregation of relevant items in closing balance sheet	Extension of final annual amount by applying the rate of change in related basic data

Notes : 1) trade payables, advances, etc.

2) extrabudgetary funds, non-profit institutions controlled by government, and nonfinancial public corporations.

### **③ Retrospective adjustment of preliminary quarterly figures when releasing final annual figures**

When final annual figures for the previous year are released in December each year, a difference is apparent between the final figure for other accounts payable and the already released preliminary quarterly figure for other accounts payable, which is substantially dependent on estimation. In order to enhance the accuracy of quarterly statistics, the preliminary figures for the current year and the previous year need to be adjusted retrospectively, in reflection of the final annual figures. Specifically, the preliminary quarterly figures for the previous year and the current year are adjusted by resetting the trend line of other accounts payable.



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