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**Data Quality Assessment Framework**

**Prepared by the Bank of Japan**

## **Data Quality Assessment Framework**

### **I. INTRODUCTION**

The “Data Quality Assessment Framework (DQAF)” of the IMF’s Statistics Department has been discussed on various occasions, and we would like to support this project as compilers of Japanese balance of payments statistics. At the same time, we would like to introduce practical applications of the framework in the context of compiling Japanese balance of payments statistics.

This paper is organized in two sections. Section II endorses appreciation of the IMF’s work on DQAF and confirms the importance. Section III explains the outline of the restructuring of Japanese balance of payments statistics currently underway by the Ministry of Finance (MOF) and the Bank of Japan (BOJ).

### **II. DQAF REVIEWED**

#### **(1) Improving the quality of statistics**

With the progress of economic globalization, the impact of cross-border economic transactions on the economy and financial market of each country has become more significant. In this context, statistics in each country have increasingly gained in importance as a tool for objectively judging the actual state of each country’s economy. On the user side, an internationally accepted and uniform DQAF could be useful in judging the reliability of individual statistics. And, on the compilers’ side, DQAF is also important as a guideline to assist them in improving the quality of their statistics in the context of increased competitiveness even in the field of statistics. We are always aware of the importance of maintaining and improving the accuracy of statistics in Japan so as to be able to produce statistics of high quality for use at home and abroad.

While the discussion on the quality of official statistics has been centering on maintaining and improving the accuracy of statistics, the fact that the IMF’s DQAF

emphasizes user convenience, e.g. serviceability and accessibility as a “quality of dimension” of official statistics, should be highly evaluated.

## **(2) Role of DQAF**

As we understand, the role of DQAF could be a guideline to support compilers of statistics in their efforts to take a concrete step to improve the quality of statistics. DQAF can be used as a concrete guideline to assist compilers in improving statistics. At the same time, statistical methodologies and integrity could be verified objectively. Furthermore, by providing users with information promptly and appropriately, user convenience can be improved.

### **Accuracy and reliability**

We endorse the IMF’s framework in singling out accuracy and reliability as the most important quality of dimension. While the coverage of data source and reporting errors should be regularly assessed, so should methodological soundness. Moreover, the outline for restructuring statistics should be provided in advance, coupled with an opportunity to invite public comments, with a view to improving transparency with respect to any major changes in statistics. The assessment of methodological soundness would contribute to improving the accuracy of statistics, and publication of such assessments could lead to improving reliability.

### **Integrity and Methodological Soundness**

Important considerations for the usefulness of statistics are that (1) the methodological basis for the production of statistics is sound, (2) the presented rules are clear and practical, and (3) “international comparability” is possible.

In this context, the following guidelines in DQAF are useful and appropriate; “2. The conceptual basis for the statistics follows international standards, guidelines, and agreed practices,” “2.4.1 Accounting is done on an accrual basis,” and “2.4.2 Market prices are used to value flows and stocks”. However, it should also be noted that, in practice, compilers may find difficulties in meeting all the criteria.

### **Improvement of user convenience (Serviceability and Accessibility)**

As clarified in the IMF's DQAF, it is important to recognize serviceability and accessibility as integral elements of "quality of dimension". However, user convenience could be improved further through (1) the more frequent and earlier dissemination of statistics, (2) expanding the scope of disclosure for data which are useful for economic analysis and meeting the needs of users, and (3) providing basic information about the definition and methodology of statistics with a view to users properly understanding the data. It is also important to invite public opinion as to whether statistics are meeting user needs.

By improving individual statistics through specific proposals derived from the DQAF, we could attain statistics of a better quality. Moreover, if statistics in each country are reviewed along the DQAF guideline, it could help reduce statistical discrepancies, which have been discussed in the IMF Committee on Balance of Payments Statistics.

### **(3) Cost of reporting**

In improving the quality of official statistics, note should be taken of the cost of reporting and the need to enhance the efficiency of compilation and production of statistics. In particular, the cooperation of reporters is essential in pursuing the "accuracy and reliability of statistics". More notice should be taken of the views of statistical compilers with respect to removing obsolete items and replacing them with more relevant ones. Also, it is important to collect essential data a minimum cost and that all data collected should be disclosed in the form of statistics.

### **III. APPLICATIONS OF DQAF IN BALANCE OF PAYMENTS STATISTICS**

#### **(1) Restructuring of balance of payments statistics in Japan**

We are preparing to introduce an electronic reporting system in Japan, which will enable, in principle, the transmission of all BOP reports via the Internet. Based on the “e-Japan” project which the Japanese Government announced this March, such a system could effect the necessary administrative procedures (in the case of BOP reporting data from companies and individuals) via the Internet, with a view to improving national convenience and administrative efficiency.

Japanese balance of payments data are collected and disseminated under the Foreign Exchange and Foreign Trade Law. Electronic reporting of administrative procedures includes transmitting BOP data reports via the Internet. The change from paper-based to online transmission will reduce the cost of reporting. Taking this opportunity, MOF and BOJ are preparing to review all processes from the collection of data to the compilation and dissemination of statistics (BPR: business process reengineering) and to make the whole process more efficient. We are also preparing to expand the scope of statistics and review the reporting system to enhance the usefulness of statistics, which could lead to an improvement in the quality of Japanese BOP statistics.

Following is the background to the decision to restructure BOP statistics taking the opportunity of the introduction of electronic reporting.

First, since the major revision of Japan’s BOP in 1996, which was to provide data on the basis of BPM5, the economic and accounting environment has changed. We thus decided this was the time for another major review of statistics. For instance, we currently compile and publish two sets of statistics for portfolio investment and direct investment, which are balance of payments statistics compiled according to domestic definitions. We plan to revise these to meet user needs.

Second, demand has increased for more extensive information about the cross-border flow of funds including short-term liabilities owned by non-residents. This need for information has become more important as the impact of cross-border financial transactions on each country’s economy has become more significant.

Third, progress in information and communication technology has enabled reporters to reduce the cost of reporting and make the process of collecting data and producing statistics more efficient.

## **(2) Expected improvement in the quality of statistics as the result of the revision of statistics**

Key points of the revision under consideration are as follows:

- (1) Portfolio investments and direct investment statistics will be reconciled on a BOP basis.
- (2) Portfolio investments on a BOP basis will be recorded when incurred rather than when settled.
- (3) Expansion of scope of disclosure: e.g. the more frequent dissemination of regional balance of payments (Summary Table: semi-annually → quarterly, portfolio investment and direct investment: semi-annually → monthly), and new publication of regional balance of payments by currency (portfolio investment and direct investment) and by industry (direct investment) are currently planned.

We expect the following improvements in data quality in the context of DQAF.

First, data management procedures, from collection to dissemination, will be thoroughly reviewed to make them more efficient, minimizing processing errors such as misreporting or misinputting data by reporters, and also errors involved in the compilation process. This could lead to improved accuracy and integrity, and higher reliability.

Second, following the review of statistics and reports, data processing procedures are to be restructured with a higher level of computerization. In the course of developing such computer systems, we will also take into account the methodological soundness and data processing accuracy of statistics not subject to restructuring.

Third, portfolio investments will be recorded when incurred in accordance with commercial accounting standards, which would be more in line with the IMF's BPM5 standards.

Fourth, while Japanese balance of payment statistics meet all of the requirements for advance release calendars, e.g. periodicity, timeliness, as per the IMF's Special Data Dissemination Standard (SDDS), we are preparing more frequent dissemination of regional balance of payments statistics and increasing the number of published items. Also, we will examine the possibility at the earlier dissemination of statistics, which could lead to improved serviceability and accessibility.

#### **IV. CONCLUSION**

While the DQAF project remains subject to discussion among statisticians and the assessment framework is not fixed, there are not likely to be many objections from participating countries. In this context, while taking into account specific institutional conditions in individual countries and the possibility it may be difficult to strictly apply DQAF to their statistics, common framework for assessing data quality would be useful as a guideline for compilers of statistics in reviewing statistics.