

**Fifteenth Meeting of the
IMF Committee on Balance of Payments Statistics
Canberra, Australia, October 21–25, 2002**

Quality of the BIS international financial statistics

Prepared by the Bank for International Settlements



QUALITY OF THE BIS INTERNATIONAL FINANCIAL STATISTICS

(New section that will be incorporated in the forthcoming Guide to the BIS International Financial Statistics)

The following assessment of the quality of the BIS international financial statistics is largely based on the IMF's Data Quality Assessment Framework (DQAF)¹. One of the advantages of using this methodology is the fact that it recognises and takes into account the multiple dimensions of data quality. Where previously data quality might have been essentially synonymous with accuracy, ie "getting the numbers right", it is today widely acknowledged that the concept has a much wider multidimensional scope.

The DQAF consists of 6 sections. In addition to a set of prerequisites of data quality (section 1 below), it covers five dimensions of quality (sections 2-6 below): 1) Integrity, 2) Methodological soundness, 3) Accuracy and reliability, 4) Serviceability and 5) Accessibility.

1. Prerequisites of quality

1.1 Legal and institutional environment

The designated central bank oversight body for the BIS international financial statistics is the Committee on the Global Financial System (CGFS), which mainly comprises the G10 central banks. Based on the recommendations of the CGFS, the BIS is given responsibility for the collection, production and dissemination of the statistics.

For the statistics based on data transmitted by the central banks or monetary authorities (the international banking statistics, the over-the-counter (OTC) derivatives statistics and the triennial central bank survey of foreign exchange and derivatives market activity), procedures for the efficient and timely flow of data are well established. The confidentiality of individual reporting entity data is guaranteed and procedures to prevent disclosure of confidential data are in place. Access to confidential data is limited to staff members for whom such information is required for the performance of their duties. To ensure a proper understanding of data requirements, to discuss possible improvements of the statistics and to avoid duplication of effort, contacts between the BIS and the reporting central banks or monetary authorities are maintained through regular correspondence and meetings.

Participation in the OTC derivatives statistics is based on a mutual agreement between the G10 countries. The reporting population for the BIS banking statistics extends beyond the G10 countries, and although participation is on a voluntary basis, the number of reporting central banks or monetary authorities has increased steadily over time and will likely continue to do so in the future. Participation is encouraged partly by the provision of various kinds of support (eg technical and methodological guidance) from the BIS to potential new reporters and partly by the fact that new reporters are offered access - by reciprocal agreement - to the full data set of existing reporters.

1.2 Resources

The allocation of resources is reviewed at regular intervals to ensure that sufficient resources for the performance of existing tasks are available. To ensure an optimal use of existing resources, new and more efficient technologies for the processing and/or dissemination of data are continuously reviewed.

For the maintenance and development of necessary skills and qualifications of staff, resources are earmarked to provide on-the-job training in relevant areas such as statistical methods, financial markets, computer technology etc.

¹ <http://dsbb.imf.org/dqrsindex.htm>



1.3 Quality awareness

With the purpose to ensure that the BIS international financial statistics remain a key source of public information on international financial market development, studies are carried out from time to time to review the usefulness of the statistics and to identify any emerging data requirements.

The reporting central banks and monetary authorities, which are among the prime users of the data, have designated staff members as contact persons for the various sets of statistics. This group of people in practice acts as an advisory council for the BIS international financial statistics in view of the fact that any changes to the statistics are conditional on their approval.

2. Integrity

This section describes the measures in place to ensure that the principle of objectivity in the collection, processing, and dissemination of statistics is firmly adhered to.

2.1 Professionalism

The professional independence of the BIS was ensured in 1930 by The Hague Agreements², which established the BIS as an international organisation governed by international law with the privileges and immunities necessary for the performance of its functions. The international legal character of the BIS and the privileges and immunities which it has enjoyed in Switzerland since its foundation were confirmed in the Headquarters Agreement² concluded by the BIS with the Swiss Federal Council in 1987. Furthermore, the BIS does not depend on financial support from any government or other public entity.

Within the organisation, a long-standing tradition for and culture of professionalism is maintained and promoted through analytical work and staff participation in and organisation of lectures, conferences and meetings with other professionals.

The legal and financial independence of the BIS prevent any improper external influence on the content or release of statistical information and - combined with the traditions and cultures of professionalism within the organisation - ensure the impartial compilation of the statistics with the choice of source data, statistical methods and definitions based purely on statistical considerations. To minimise the possibility of misinterpretation or misuse, the data are often accompanied by analyses and explanatory briefings when released to the public.

2.2 Transparency

The BIS international financial statistics are published in press releases and/or in the statistical annex of the BIS Quarterly Review, which are clearly identified as BIS products by both name and logo. In these publications, references are made to the BIS website (www.bis.org) where more detailed statistical information and a full set of historical time series are available free of charge. When the statistics are used or reproduced attribution is generally requested, and in the case of joint publication (such as the Joint BIS-IMF-OECD-World Bank statistics on external debt, cf. chapter VI), the contribution of the BIS is clearly identified.

No governmental organisations such as ministries and government agencies have access to the data prior to release to the public³.

Users are notified in advance through press releases or dedicated articles in the BIS Quarterly Review of major methodological changes, whereas minor changes to the statistical methodology are announced at the time of publication.

² Further information can be found on the BIS website: <http://www.bis.org/about/legal.htm>.

³ Apart from the reporting central banks and monetary authorities, selected news agencies have access to the data before release to the public, cf. section 6.1 below.



2.3 Ethical standards

The BIS Staff Regulations clearly specifies the rules of conduct in general and the rules with regard to confidential information in particular. New staff members are made aware of these guidelines when they join the organisation, and all staff members are reminded periodically of the guidelines.

3. Methodological soundness

This section describes to what extent the methodological basis for the statistics follow internationally accepted standards, guidelines, or good practices.

3.1 Concepts and definitions

The collection of the BIS international banking statistics is based on the “Guide to the International Banking Statistics”. Similarly, the OTC derivatives statistics and the triennial central bank survey of foreign exchange and derivatives market activity are collected and prepared according to the “Guidelines for the OTC Derivatives Statistics and the Triennial Survey”. These documents, which have been prepared by statisticians at the BIS in close consultation with central bank colleagues and CGFS analysts, have been accepted as the relevant standards by the reporting institutions, which comprise a large number of the world’s major central banks and monetary authorities.

Although no explicit standards exist for the other BIS international financial statistics, internationally accepted guidelines or good practices are generally observed whenever applicable.

The locational banking statistics are based on the principle of residency, which is in line with the methodology of balance of payments and international investment position statistics. The consolidated banking statistics are largely based on bank supervision principles, ie where the reporting of a bank head office is inclusive of its foreign offices (branches and subsidiaries) worldwide with all inter-office accounts being netted out. This principle of consolidation also applies to the OTC derivatives statistics.

In more general terms, the guiding principle for the BIS international financial statistics is that existing standards and guidelines are used as far as possible to ensure consistency and minimise the reporting burden. Owing to the unique nature of the statistics, however, the development of some of the statistics has necessitated that the BIS itself develops and sets appropriate statistical standards in close consultation with central bank experts.

3.2 Scope

In principle, the scope of the BIS international financial statistics is to provide complete global coverage in their respective areas of focus. In practice, the actual coverage must of course be balanced between costs and benefits as well as between feasibility and desirability. To illustrate this by an example, the reporting population for the BIS international banking statistics is made up of the world’s most significant banking centres rather than all countries in the world.

3.3 Classification/sectorisation

Where applicable, classification and sectorisation are broadly consistent with internationally recommended statistical guidelines such as the 1993 SNA (System of National Accounts) and the 1995 ESA (European System of Accounts). One exception worth mentioning is the treatment of central banks as part of the public sector rather than as part of the financial sector in the BIS securities statistics and the consolidated banking statistics.

The applied country and currency codes follow the ISO classification.

3.4 Basis for recording

To ensure consistency with other statistical systems such as balance of payments and international investment position statistics, the recommended basis for valuation of financial claims in the BIS international financial statistics is market prices. However, in the context of the consolidated banking statistics financial claims belonging to the banking book are recommended to be valued at face values or cost prices in line with the International Accounting Standards (IAS39). For the valuation of liabilities, contractual or nominal values are generally deemed more appropriate than market values.



In line with what is internationally accepted as best practice, the exchange rate adjusted changes in the locational banking statistics are calculated by converting the stock data into their original currency and then convert the change in amounts outstanding to US dollars using period average rates.

In the BIS securities statistics, the information on stocks outstanding of issued securities is based on nominal values. For the data on international debt securities, net flows are calculated as the difference between completed issues (based on the payment date) and repaid issues calculated as the sum of early repayments (such as exercised put and call options or sinking funds) and scheduled repayments (based on the maturity date). The methodology for calculating exchange rate adjusted changes for the data on domestic debt securities is similar to the one applied in the locational banking statistics.

The recording basis for the OTC derivatives statistics and the triennial central bank survey of foreign exchange and derivatives market activity is market values (positive and negative) as well as notional amounts, whereas the exchange-traded derivatives statistics are valued only in terms of the notional principal calculated as the number of contracts multiplied by the face value of the derivatives contract. For the calculation of notional amounts of equity index contracts, the latest values of stock market indices are used.

In accordance with international conventions, the BIS uses the US dollar as the numeraire in its statistics. Stock data are converted from national currencies into US dollar using end-of-period exchange rates.

4. Accuracy and reliability

This section describes to what extent source data and statistical techniques are sound and statistical outputs sufficiently portray reality.

4.1 Source data

The available source data are considered to be timely and sufficient to provide an adequate basis for compiling global financial statistics. To ensure that data collection remains comprehensive, the data sources are reviewed periodically.

For the BIS international banking statistics, analyses suggest that the overall coverage of the data exceeds 90% of global foreign banking business. To ensure that the coverage remains high, efforts are made on a continuous basis to include countries/territories with evolving international banking business in the reporting population.

The coverage of the international debt securities statistics, where the data are merged from three markets sources each with its unique contents, is believed to be very close to complete. The data on domestic debt securities, which are mainly collected from central bank sources, include the OECD countries plus selected major emerging market countries.

The triennial central bank survey of foreign exchange and derivatives market activity is estimated to cover at least 95% of global market activity, and by using this survey as a benchmark the coverage of the OTC derivatives statistics can be calculated as about 87% of the survey or 83% of the global size of the market. The current coverage of the products covered by the exchange-traded derivatives statistics is estimated to be in excess of 95% of total global activity, and efforts are made on a continuous basis to further improve coverage by including more contracts and exchanges.

4.2 Statistical techniques

Data management procedures are completely computerised and thoroughly documented.

Statistical methods are used to a limited degree to fill reporting gaps in the BIS international banking statistics. These estimation techniques conform with sound statistical procedures that are in each case chosen on a best-practice basis. Examples of statistical methods used (in the context of the locational banking statistics) are:

- A few reporting economies provide only a sectoral or currency breakdown for total claims/liabilities with no further breakdown by individual debtor/creditor country. In this case, the latter is estimated by applying the percentage distribution of the totals to each individual country.



- A small number of reporting economies provide only a split between domestic and foreign currency with no further breakdown by individual foreign currencies. For the compilation of exchange rate adjusted changes, data for the missing currencies are estimated by applying the currency distribution of all industrial countries' assets vis-à-vis the reporting entity in question.
- One reporting centre (Bahamas) only provides figures on a semi-annual basis⁴. The statistical method used to estimate the missing quarters is to initially bring forward the figures from the preceding quarter⁵ and later, when figures for the next quarter have become available, by interpolating between the two surrounding quarters.

The estimation methods are communicated to the group of contributing central banks or monetary authorities on a regular basis and are made available to the general public on request.

Statistical methods are also applied to the results of the triennial central bank survey of foreign exchange and derivatives market activity in order to estimate reporting gaps. This procedure is based on information on coverage from each participating country and is described in the publication in which the results of the survey are presented.

4.3 Assessment and validation of source data

Source data are routinely assessed either as a part of the data compilation process (BIS securities and exchange-traded derivatives statistics) or as part of the general statistical quality control (BIS international banking and OTC derivatives statistics, triennial central bank survey of foreign exchange and derivatives market activity).

The source data are not subject to any sampling procedures applied by the BIS.

4.4 Assessment and validation of intermediate data and statistical outputs

The final statistical outputs are subject to plausibility checks and review both internally at the BIS as well as by the contributing central banks and monetary authorities. Given the fully computerised workflow and the rigorous assessment of source data, this assessment procedure is considered sufficient at this stage of the preparation process.

4.5 Revision studies

Data revisions do not follow a sustained pattern, and revision studies consequently do not provide any useful input for statistical processes that could potentially be applied to and enhance the accuracy of the data.

5. Serviceability

This section describes to what extent the statistics are relevant, timely, consistent, and follow a predictable revisions policy.

5.1 Relevance

The relevance of the BIS international financial statistics is assessed at bi-annual meetings with the contributing central banks and monetary authorities, which are also among the principal users of the data. In addition to this, feedback from central banks and international organisations as well as from other users of the data is received on a continuous basis through written correspondence or in the context of meetings, seminars and conferences.

⁴ Figures for US banks in the Bahamas, which constitute more than two thirds of the total, are available on a quarterly basis.

⁵ This is considered best practice given the fact that the series does not show any clear trend over time.



The received feedback strongly suggests that the BIS international financial statistics are considered highly relevant both for tracking global developments in financial markets and as input in other statistical systems⁶. Also, the BIS statistics constitute the principal input of the Joint BIS-IMF-OECD-World Bank statistics on external debt (cf. chapter VI).

5.2 Timeliness and periodicity

Due to the unique nature of the BIS international financial statistics, no dissemination standards for timeliness and periodicity exist. This fact aside, the BIS is aware of the importance of providing regular and timely information and is constantly in search of making improvements. Recent examples of significant progress are the move from semi-annual to quarterly periodicity for the consolidated banking statistics in 2000 and the gradual reduction of the publication time lag by 2 months to around 4 months in 1998-1999.

5.3 Consistency

Due to mainly the continuous inclusion of new reporting economies, the BIS international banking statistics contain occasional breaks in series⁷. This has an inevitable effect on the stock figures, whereas the figures on exchange rate adjusted changes are unaffected, since the calculation of these figures takes into account these breaks in series. A complete list of breaks in series in the BIS banking statistics is available on the BIS website.

A major break in the consolidated banking statistics took place in 1999, when the reporting economies started to report claims vis-à-vis each other. This change in methodology had a large impact on the global total as well as the subtotals for claims vis-à-vis developed countries, whereas the figures on claims vis-à-vis offshore centres and developing countries were unaffected.

All reporting central banks and monetary authorities use the same report forms to report the BIS international banking statistics, which in principle ensures the internal consistency of the data. In practice, this is to some extent compromised by various gaps in reporting. Gaps in reporting also account for the lack of complete consistency between the locational banking statistics on a residency basis and the locational banking statistics on a nationality basis. A comprehensive description of reporting gaps is given in the "Guide to the International Banking Statistics", which is available on the BIS website.

The international debt securities statistics are generally consistent back to 1996, where a substantial break in series occurred as a result of a change in data sources. For the same reason, the consistency of the OTC derivatives statistics only goes back to 1998, whereas the exchange-traded derivatives statistics and the statistics on announced international equity issues are largely consistent for the whole history⁸. In contrast to this, the methodology used in the triennial central bank survey of foreign exchange and derivatives market activity has changed almost every time a new survey has been conducted.

5.4 Revision policy and practice

By long-standing tradition, revisions to the BIS international financial statistics are incorporated and published at the time of release of new data.

⁶ Some countries use the BIS statistics to close gaps in their balance of payments and international investment position statistics.

⁷ New reporting economies are traditionally introduced in the 4th quarter of a given year.

⁸ A change in data sources for the exchange-traded derivatives statistics took place in 2000, but the resulting break in series is minor.



For the BIS international banking statistics, revisions are normally minor for even quarters, whereas they can be substantial for uneven quarters due to the semi-annual reporting of one reporting economy⁹ (Bahamas) and the consequent estimation method applied (cf. section 4.2 above).

For the BIS securities statistics, revisions can occasionally be substantial mainly because of revisions in the source data, whereas revisions for the derivatives statistics are negligible.

6. Accessibility

This section describes to what extent the data and metadata are easily available and assistance to users is adequate.

6.1 Data accessibility

The BIS international financial statistics are made available as hard-copy version in press releases and the BIS Quarterly Review, where the data are accompanied by analyses of current-period developments supported by illustrative tables and graphs. In addition to this, the statistics are published on the BIS website, where more detailed information and a full set of historical time series are available free of charge in machine-readable form for easy download and further analysis.

Non-published sub-aggregates are made available upon request, provided that they are not confidential.

In addition to the contributing central banks and monetary authorities, selected news agencies are given access to the data before release to the public. In the press alert sent to the news agencies, it is clearly stated that the data are strictly confidential and that a breach of the embargo or disclosure of any details will result in exclusion from future releases of embargoed information.

A schedule for data release is announced in advance to the contributing central banks and monetary authorities only. Following the recent improvements in the timeliness of the reporting of the consolidated banking statistics, these are published as the first set of BIS international banking statistics in a press release about four months after the end of the reference quarter. In this press release, the time of publication of the BIS Quarterly Review containing all BIS international financial statistics is announced.

6.2 Metadata accessibility

Documentation of the BIS statistics is provided in chapters II-V of this publication as well as in the form of explanatory notes in the different publications (press releases and the BIS Quarterly Review).

For the BIS international banking statistics, a more detailed and technical description is given in the "Guide to the International Banking Statistics", which is available on the BIS website. Similarly, a thorough description of the methodology underlying the triennial central bank survey of foreign exchange and derivatives market activity is given in the publication where the results of the survey are presented.

6.3 Assistance to users

All statistical releases are accompanied by contact details (telephone number and e-mail address). For each set of statistics, prompt and knowledgeable service and support is available to all users.

⁹ Until recently, another offshore centre (Cayman Islands) also reported on a semi-annual basis.