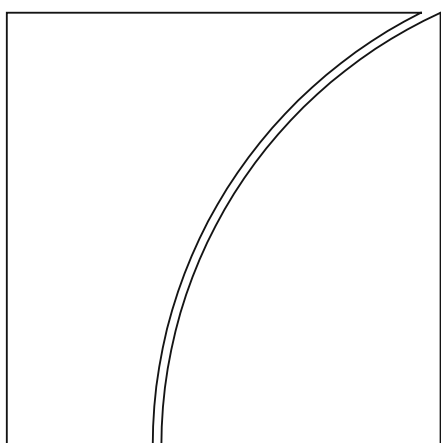


Irving Fisher Committee on Central Bank Statistics



2015 IFC Annual Report

January 2016



BANK FOR INTERNATIONAL SETTLEMENTS

The views expressed in this Annual Report do not necessarily reflect the views of individual IFC member institutions or the Bank for International Settlements.

This publication is available on the BIS website (www.bis.org).

© *Bank for International Settlements 2016. All rights reserved. Brief excerpts may be reproduced or translated provided the source is stated.*

ISSN 1991-7511 (online)
ISBN 978-92-9197-398-9 (online)

Contents

2015 Annual Report of the Irving Fisher Committee on Central Bank Statistics.....	1
Governance and organisation	1
IFC activities over the last year	1
Financial inclusion	1
“Big data”	2
International capital flows and balance of payments issues	3
Data to support financial stability analysis.....	3
Other work supporting international statistical initiatives.....	4
Looking ahead	5
Annex 1: Members of the IFC Executive as of December 2015	6
Annex 2: Executive summary of the report on <i>Central banks’ use of and interest in</i> <i>“big data”</i>	7
Annex 3: Main messages of the IAG reference document <i>Consolidation and</i> <i>corporate groups: an overview of methodological and practical issues</i>	9

2015 Annual Report of the Irving Fisher Committee on Central Bank Statistics

On 11 January 2016 the BIS All Governors' meeting approved the publication of this sixth Annual Report of the Irving Fisher Committee on Central Bank Statistics (IFC). It provides a brief update on the governance of the IFC, a review of its activities over the past year, and a summary of its plans for future initiatives.

Governance and organisation

The IFC is a global network of central bank economists, statisticians and policymakers that discusses statistical issues of interest to central banks. Its institutional members comprise central banks or international and regional organisations formally involved in central banking issues – the last member to join the IFC was the State Bank of Vietnam on 1 April 2015. The Committee now has 83 members, including almost all the BIS shareholder central banks.

On 26 July 2015, the Committee held its annual meeting under the chairmanship of Mr Turalay Kenç, Deputy Governor of the Central Bank of the Republic of Turkey, to discuss its activities, examine future work, and review the composition of its executive body (see Annex 1 for the composition of the IFC Executive).

The IFC is an affiliated member of the International Statistical Institute (ISI) under a memorandum of understanding agreed with the BIS. In addition, a growing number of IFC central banks – 27 as of November 2015 – have become ISI corporate members recently. Lastly, the IFC continues to contribute to ISI work, and in particular participated actively in the ISI's 60th biennial World Statistics Congress held in 2015.

IFC activities over the last year

The IFC organised several activities in 2015, with the support of its member central banks and a number of international organisations. The main areas covered were: financial inclusion; "big data"; international capital flows and balance of payments issues; data to support financial stability analysis; and other work supporting international statistical initiatives.

Financial inclusion

Financial inclusion has become a fundamental issue for many governments and policymakers around the world, and the central banking community has a particular interest in it. The IFC has proved to be a useful forum in facilitating discussions on data issues related to this area. In 2015, it published IFC Bulletin no 38 on *Financial inclusion indicators*, based on the Sasana workshop co-organised with the Central Bank of Malaysia. The work of the IFC has supported the identification of a number of ways to promote financial inclusion through better data, building on its members' cumulated experience with data and measurement issues. Well founded data frameworks are essential when developing financial services for the poor, in

both formal and informal markets, and adequate indicators are a precondition for good financial inclusion policies. They ensure that financial inclusion is properly assessed and that policies aimed at developing it are adequately implemented, monitored and adjusted as required. Good statistics can also help to strike a proper balance between encouraging innovation and the growth of financial services on the one hand, and ensuring that financial stability is preserved on the other.

Following consultation with financial standard-setting bodies, the Committee also organised in 2015 with the Central Bank of Malaysia and the Central Bank of the Republic of Turkey a survey to solicit information from its members on national practices and projects in the area of financial inclusion, including the implementation of international data initiatives and challenges faced by domestic authorities. The results of the survey are yet to be analysed and will serve as input into future work to improve and harmonise data on financial inclusion, with a particular focus on issues relating to regulation and payment systems.

"Big data"

The IFC has been actively working on the issue of "big data". This concept has emerged as an important topic in the fields of data creation, storage, retrieval and analysis, and most central banks have been trying to catch up with this development. Following the webinar organised with the ECB in 2014 on *Using big data for forecasting and statistics*, the Committee organised with the Central Bank of the Republic of Turkey and the ECB a survey in 2015 to assess central banks' experiences and interest in exploring big data.

The survey was answered by 69 IFC members and monetary authorities, and the results were published in the IFC Report on *Central banks' use of and interest in "big data"*. The main conclusions of the survey were the following (see Annex 2):

- There is strong interest in big data in the central banking community, in particular at senior policy level; but central banks' actual involvement in the use of big data is currently limited.
- Big data can be useful for conducting central bank policies, and is perceived as a potentially effective tool in supporting macroeconomic and financial stability analyses.
- Exploring big data is a complex, multifaceted task, and any regular production of big data-based information will take time, especially because of resource issues.
- Big data may also create new information/research needs, and international cooperation can add value in this context.

In view of the strong interest expressed by the central banking community, the IFC will continue to monitor developments and issues related to big data – such as the methodologies for its analysis, its value added compared with "traditional" statistics, and the specific structure of the data sets. However, considering that the scope of this work can be quite large, the Committee will focus on a few pilot projects on which central banks will be invited to cooperate so as to share specific experiences. The potential sources envisaged in this context relate to exploring: (i) internet data sets; (ii) administrative data sets; (iii) commercial data sets; and (iv) financial market data sets.

International capital flows and balance of payments issues

As regards work on capital flows, the IFC organised in 2015 a seminar on *Assessing international capital flows after the crisis* in cooperation with the Central Bank of Brazil and the Center for Latin American Monetary Studies (CEMLA). This seminar highlighted a number of areas of policy interest. First, it is essential to pay attention to how capital flows are registered, measured and interpreted, with a specific focus on their currency composition and maturity. Large inflows may have a sizeable macroeconomic impact, contribute to the build-up of vulnerabilities, and facilitate international spillover effects, especially through cross-border banking. Moreover, they can be highly volatile and lead to systemic disruptions when they reverse. Second, while data consistency, availability and reliability continue to vary across countries, the registration of capital flows has improved with the new global statistical standards. In particular, the measurement and reporting of balance of payments statistics and IIP data have been greatly enhanced with BPM6, *the Balance of Payments and International Investment Position Manual* (sixth edition). Third, attention should be devoted to the nationality, and not just the residence, of debtors and creditors when assessing international capital flows. One aspect is the link between global liquidity and domestic credit conditions, especially reflecting the role played by international banks' consolidated balance sheets. Another is the growing issuance of international bonds by foreign affiliates controlled by domestic corporates, the "second phase of global liquidity". Fourth, there are important communication challenges, since public attention continues to be focused narrowly on capital flows and not enough on balance sheet positions. Similarly, gross and not just net aggregates do matter in the assessment of financial stability issues – for instance, the importance of maturity and currency mismatches. Lastly, country-level approaches cannot be sufficient, and there is merit in developing a "global flow of funds matrix" to provide a more consistent picture of financial flows at the global level.

Turning to work on balance of payments (BoP) issues, the IFC has established the *BOP.net* network of BoP compilers. This network allows central bank members to promote knowledge-sharing and the exchange of experiences on BoP issues. The objective is not to provide methodological instructions or to set compilation standards, but rather to take stock of existing practices in an informal way. Central banks' feedback suggests that this network can indeed be an instrumental platform to support global statistical initiatives in specific areas, and work has already been initiated on bilateral BoP data and holdings of securities. Moreover, the network is expected to play a useful role in collecting central banks' views and liaising in a flexible manner with the appropriate bodies such as the IMF BOPCOM Committee which are reflecting on future developments related to BoP statistics.

Data to support financial stability analysis

The IFC organised with the Central Bank of Poland in 2015 a workshop on *Combining micro and macro statistical data for financial stability analysis – experiences, opportunities and challenges*. This event was aimed at presenting theories and practical applications of statistical data and frameworks supporting both the micro and macro aspect of financial stability analyses. Special attention was paid to integrated solutions designed to analyse the interdependencies between these two dimensions of financial systems' stability. The workshop highlighted a number of issues that are particularly relevant in this context.

To begin with, the recent financial crisis has shown the shortcomings of supervision and financial stability analysis based solely on micro-level data investigation. It was also a catalyst for developing new statistical and analytical frameworks that take better account of the processes affecting the entire financial system, and not just the perspective of specific financial institutions. Information systems are thus being re-engineered so as to integrate micro- and macro-level information and appropriately tackle the risks faced by individual firms and their whole financial networks. A promising avenue for addressing this duality is the development of micro- and macro-data-integrated statistical frameworks – for instance, to construct relevant macroprudential indicators.

In addition, there is a growing recognition of the richness of micro, granular data sources and of their interest for financial stability analysis. This is particularly relevant for entity-level credit information, and many countries have set up central credit registers to that end. On the one hand, these databases support micro-level supervision, especially for credit and counterparty risk analysis. On the other hand, they also provide more “macro” information about the domestic and cross-border connections of financial institutions, supporting the analysis of credit and counterparty risk contagion across sectors and jurisdictions.

However, the development of the new statistical frameworks remains limited by the scarcity of reliable and timely statistical data. For instance, on- and off-balance sheet positions are still not described or reported with sufficient granularity. Furthermore, the limited degree of statistical data harmonisation is hindering the analysis of connections among financial institutions, not least across jurisdictions. From this perspective, there is value in intensifying cooperation between national and international institutions. A number of initiatives aimed at the harmonisation of statistical data frameworks have already been launched, especially under the umbrella of the G20, and need to be correctly implemented to ensure a proper mobilisation of micro-type information at the global level.

Other work supporting international statistical initiatives

The IFC sponsored several sessions at the ISI’s 60th biennial World Statistics Congress in 2015 on various topics such as: *Central bank sources and uses of derivative statistics*; *Improving government debt statistics*; *The use of surveys by central banks*; *Developing and improving sectoral accounts*; and *Micro data for multipurpose data provision*.

Another significant part of the Committee’s work has been pursued in liaison with other international initiatives, especially the Data Gaps Initiative (DGI) endorsed by the G20 in the aftermath of the financial crisis in 2009. One important topic in 2015 was the completion of the recommendation to the Inter-Agency Group on Economic and Financial Statistics (IAG)¹ to investigate the issue of monitoring and measuring cross-border exposures of corporations with the intention of promoting reporting guidance and the dissemination of data. The completed reference document on *Consolidation and corporate groups: an overview of methodological*

¹ The IAG is composed of senior officials of the statistical functions of the BIS, the IMF, the ECB, Eurostat, the OECD, the World Bank and the UN (see www.principalglobalindicators.org). The BIS (IFC Secretariat) provided the secretariat for the work on this particular recommendation.

and practical issues was based on the outcome of an IAG-IFC workshop on *Residency/local and nationality/global views of financial positions* (Annex 3). It provides a stocktaking of the methodologies of the various statistical systems in use, especially as regards the definition of corporate groups, the consolidation concepts adopted, and the comparability of the various existing data sets. It also suggests some methodological and practical avenues to facilitate the measurement and monitoring by users of these statistics on the positions of groups of financial and non-financial corporations. Lastly, it highlights work that could be undertaken to measure and monitor cross-border exposures of corporations and which is now being considered in the context of the second phase of the DGI as from 2016.

Another key recommendation of the DGI has been to develop and improve sectoral financial accounts. To that end, the IFC has been organising workshops for central banks in various regions, in close coordination with other international organisations such as the IMF and central banks. An important objective for the interest of the central banking community is to augment the “traditional” national accounts framework to present information on financial flows and positions on a sectoral basis. Such “integrated sectoral financial accounts” can be instrumental in supporting financial stability analyses. However, the development of financial accounts brings with it acute data challenges. The IFC will continue to promote knowledge-sharing on this important topic for central banks and to identify best practices.

Yet a third recommendation worth mentioning in the second phase of the DGI relates to data-sharing. The IFC report on data-sharing published in 2015 has been openly referred to by several G20 member countries in this context. In addition, there is general interest in updating the work undertaken by the IFC on data-sharing issues and good practices between statistical and supervisory authorities. This will be done in the context of the membership survey to be conducted in 2016 among IFC participants.

Looking ahead

In 2016, the Committee will further its work in the various areas outlined above, especially on big data, financial inclusion, financial stability analysis, balance of payments issues and financial accounts – with an additional regional workshop on Developing and improving sectoral financial accounts to be held at the Bank of Algeria in January 2016. It will also continue to work on those aspects of the DGI that are relevant for the central banking statistical community. Furthermore, it will continue to contribute actively to the activities of the ISI, especially towards the preparation of the next ISI World Statistical Congress scheduled in Morocco in 2017, which will be organised with the support of the Bank of Morocco.

A key event will be the IFC 2016 Biennial Conference, which will be held at the BIS in Basel on 8–9 September 2016. The programme of the conference will provide a welcome opportunity for the central banking community to review a number of statistical issues that are relevant at the current juncture, including data-sharing arrangements and techniques, the development of micro statistical identifiers, and indicators on the stance and impact of monetary policies. Lastly, an IFC workshop will be co-organised with the National Bank of Belgium on data issues raised by macroprudential policies, reflecting the strong interest expressed by IFC members in this topic.

Annex 1

Members of the IFC Executive as of December 2015

Early in 2015, one position on the Executive (previously occupied by Ms Gülbin Şahinbeyoğlu) became vacant and was filled by Mr Hock Chai Toh, Director of the Statistical Services Department of the Central Bank of Malaysia, for a term up to end-2017. In addition, Mr Joon Jung, a previous member of the Executive, left his position at the Bank of Korea, and his successor, Mr Seung Hwan Park, Director of the Monetary and Financial Statistics Division, was invited, in line with IFC rules, to join the Executive until the completion of Mr Jung's remaining term (end-2015).

In July 2015, at its annual meeting, the Committee endorsed the proposal to renew the mandates of its five departing members – Katherine Hennings (Brazil, Vice-Chair), Aurel Schubert (ECB, Vice-Chair), Charles Thomas (United States), Masahiro Higo (Japan) and Seung Hwan Park (Korea) – for another three-year term, ie up to end-2018.

The table below shows the composition of the IFC Executive as of 1 January 2016:

Executive member	Institution	Term
1. Mr Turalay KENÇ (Chair)	Central Bank of the Republic of Turkey	2015–17
2. Ms Katherine HENNINGS (Vice-Chair)	Central Bank of Brazil	2010–18
3. Mr Aurel SCHUBERT (Vice-Chair)	European Central Bank	2006–18
4. Mr João CADETE DE MATOS	Bank of Portugal	2015–17
5. Mr Eugeniusz GATNAR	National Bank of Poland	2014–16
6. Mr Masahiro HIGO	Bank of Japan	2013–18
7. Mr Robert KIRCHNER	Deutsche Bundesbank	2015–17
8. Mr Olorunsola Emmanuel OLOWOFESO	Central Bank of Nigeria	2014–16
9. Mr Seung Hwan PARK	Bank of Korea	2015–18
10. Mr Charles THOMAS	Board of Governors of the Federal Reserve System	2009–18
11. Mr Hock Chai TOH	Central Bank of Malaysia	2015–17

Annex 2

Executive summary of the report on *Central banks' use of and interest in "big data"*²

This report presents the results of the 2015 IFC survey of central banks on the use of and interest in big data. The aim of this survey was twofold:

- (i) to take stock of central banking experience in the use of big data; and
- (ii) to explore central banks' interest in this topic with a view to defining a roadmap for further action.

The online survey took place in early 2015. The vast majority (69) of IFC member central banks responded, representing a response rate of 83%. The main conclusions of the survey are the following:

Conclusion 1: *There is strong interest in big data in the central banking community, in particular at senior policy level.* Around two thirds of central banks are formally discussing or reviewing this topic internally.

Conclusion 2: *Central banks' actual involvement in the use of big data is currently limited.* In contrast to their interest in the topic, only one third of the central banks surveyed are already using big data sources regularly or have started pilot initiatives. The related big data projects consist primarily in using conventional structured data sets (relying, for instance on "official and administrative" sources and on micro data reported by the banking industry). However, there also seems to be a significant amount of interest in using private big data sources, such as Google search data, commercial data vendors' data sets, mobile positioning data and news media.

Conclusion 3: *Big data can be useful for conducting central bank policies.* However, "conventional structured data sources" appear to be better known and more effectively mobilised than "new" big data sources. This might reflect the accumulated experience of central banks in working with large data sets from public sources or micro supervisory data, as well as the challenges posed by using new, private big data sources.

Conclusion 4: *Big data is perceived as a potentially effective tool in supporting macroeconomic and financial stability analyses.* Most central banks surveyed expect to see a growing use of big data sources for macroeconomic and financial stability purposes, especially in the areas of: economic forecasting (for economic indicators such as inflation, housing prices, unemployment, GDP, industrial production, retail sales, external sector developments and tourism activity); business cycle analysis (eg sentiment indicators, nowcasting techniques); and financial stability analysis (eg construction of risk indicators, assessment of investors' behaviour, identification of credit and market risk, monitoring of capital flows and supervisory tasks). Moreover, it was felt that big data could also be used to enhance the quality of existing, "more conventional" statistics.

² Available at <http://www.bis.org/ifc/publ/ifc-report-bigdata.pdf>

Conclusion 5: *Big data may also create new information/research needs.*

Interestingly, a significant proportion of the central banks surveyed expressed an interest not only in how big data information can help them to better analyse economic variables, but also in assessing the potential economy-wide influence of big data activities (eg web searches).

Conclusion 6: *International cooperation can add value.* More than 70% of the central banks would like to cooperate with their counterparts when investing in the area of big data. The way forward, as expressed by the vast majority of the respondents, is to draw up a roadmap and define specific pilot projects. This step-by-step approach is perceived to be the most effective, particularly for clarifying the benefits of using big data sources, managing the associated challenges, and supporting the implementation of central bank policies.

Conclusion 7: *Exploring big data is a complex, multifaceted task.* Central banks have identified as many as nine priority areas to focus on. These cover a wide range of topics, from purely statistical ones (eg sampling techniques) to economic analyses (eg summary indicators), administrative issues (eg resources) and public policy (eg communication).

Conclusion 8: *Regular production of big data-based information will take time, especially because of resource issues.* A large majority of the respondents (ie close to 60%) do not consider that their central bank is ready to start regular statistical production using big data sources. A major concern relates to high costs in terms of investment in human capital and IT.

Annex 3

Main messages of the IAG reference document

Consolidation and corporate groups: an overview of methodological and practical issues³

A key objective is to achieve a proper measuring and monitoring of (cross-border) exposures of financial and non-financial corporations, including foreign exchange and derivatives exposures. A first step is to take stock of the existing cross-border data, which measure financial positions, revaluations and transactions of financial and non-financial corporations. One primary source is the balance of payments and international investment position statistics, whose methodology is fully aligned with the residency-based approach described in the 2008 System of National Accounts (SNA). In addition, the national accounts framework provides a way to distinguish corporations under the concept of control. Certainly, the aggregated data are usually non-consolidated, but consolidated presentations can occasionally be applied to specific sectors or subsectors for analytical or policy purposes.

This residency-based approach could be usefully complemented by a “corporate group” approach as already implemented in the business accounting and the financial supervisory frameworks (and also hinted at to some extent in statistical frameworks such as the SNA). On the basis of the concept of control, controlling and controlled units can be aggregated and their financial statements consolidated so as to eliminate intragroup positions and flows. The resultant corporate groups usually include units resident in different economies and operating in different sectors/subsectors. The problem, however, is the impossibility of reconciling aggregated data compiled on a residency basis and those constructed under the corporate group approach (one would have to split a corporate group into the various subgroups residing in each of the relevant countries). This means that further research needs to be done to facilitate the comparison between the existing business accounting, supervisory and statistical standards and practices, and to combine them in an analytically useful way. The implementation of the Legal Entity Identifier (LEI) initiative would represent an instrumental step towards facilitating this endeavour.

In practice, making these two approaches complementary requires a number of actions. One is to properly define the key concepts of control and residency versus nationality. A second is to review the methodological and practical issues of handling the concept of consolidation and the definition of corporate groups (including banks and financial groups). Another is to develop specific initiatives aimed at measuring and monitoring (cross-border) exposures of non-financial and financial corporations, as envisaged by Recommendation 13 of the Data Gaps Initiative launched in 2009.

³ Available at <http://www.bis.org/ifc/publ/iagrefdoc-oct15.pdf>

In particular, a number of areas have been identified in which further statistical work could be carried out, namely to:

- Promote the measurement of domestic and foreign assets and liabilities of financial and non-financial corporations, especially through the international investment position statistics based on the residency approach.
- Enhance the comprehensiveness and consistency of the data collected under existing residency, nationality and consolidated approaches so as to explore possible consistent measures for monitoring corporations' cross-border exposures, both on- and off-balance sheet (especially through the operations of their overseas subsidiaries). To that end, mobilise to the extent possible information on controlling entities and intragroup positions so as to better understand intragroup funding and risk transfer issues.
- In the context of the second phase of the Data Gaps Initiative, scheduled to be initiated in 2016, rely to the extent possible on existing data collections, especially those of the BIS (eg international banking statistics (IBS), debt securities) and the IMF (intragroup funding through the Coordinated Direct Investment Survey (CDIS) and Standardized Report Forms (SRFs) for Reporting Monetary Data) as well as the OECD (multinational enterprises (MNEs)). This second phase will, in particular, represent a key opportunity to encourage greater participation in these data collections on the part the countries with systemic impact on the global financial system.
- Encourage current OECD work on integrating foreign direct investment and MNE statistics so as to build consistent data series for large globally operating corporates. A case in point is the assessment of the actual cross-border exposures of MNEs headquartered in a country, especially those booked through their overseas subsidiaries.
- Address data gaps related to corporate hedging activities and other derivatives-related positions, especially via improved business accounting disclosures, reduced gaps in statistical reporting and increased availability of (consolidated) outstanding derivatives positions.
- Encourage countries and international and supranational organisations to work together on promoting convergence in: drawing up definitions of consolidation applicable to corporations; improving the definition and measurement of risk exposures, in coordination with the relevant bodies; and supporting the ongoing initiatives already being undertaken in the context of the statistical collections of the BIS.
- Further improve the "infrastructure" for an easier consolidation of statistical data at a granular corporate level, in particular by: (i) promoting the reporting of "relationships" among individual firms through the development of registers that draw on the LEI initiative to facilitate the identification of foreign subsidiaries and the approach of group-level information; and (ii) enhancing the standardisation of the identification of financial instruments.
- Encourage international and supranational initiatives to identify and regularly review the structure and nationality of corporations included in groups operating at global level, by mobilising existing information (eg business registers, supervisory public information and consolidated balance sheets) and conducting reconciliation exercises. The disclosure of reconciled and updated reference lists should be supported to improve the consistency of consolidated statistics and remove double-counting. The inclusion of relationship data in the

Global LEI System could be a way to record and compare more cost-effectively the lists of entities included in different perimeters of consolidation.

- Support the regular organisation of conferences on these issues with a view to promoting academic research and policy-oriented recommendations.