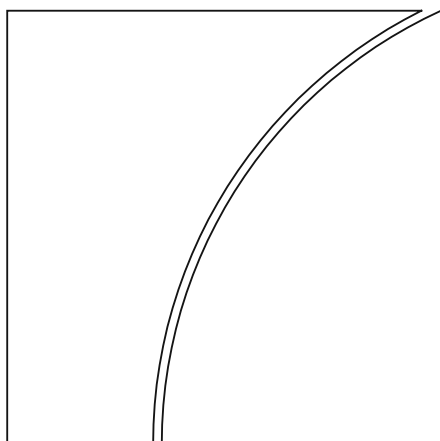


# Irving Fisher Committee on Central Bank Statistics



## 2018 IFC Annual Report

March 2019



**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.

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# 2018 Annual Report of the Irving Fisher Committee on Central Bank Statistics

On 11 March 2019 the BIS All Governors' meeting approved the publication of the 2018 Annual Report of the Irving Fisher Committee on Central Bank Statistics (IFC). It provides a brief update on the IFC's governance, a review of its activities over the past year, and an outline of its future plans.

## Executive summary

As a global network that discusses statistical issues of interest to central banks, the IFC now has 91 members and is an affiliated member of the International Statistical Institute (ISI). It is chaired by Claudia Buch, Vice-President of the Deutsche Bundesbank.

The Committee's work agenda covered the following main areas in 2018:

- A key event was the **Ninth IFC Conference** on "*Are post-crisis statistical initiatives completed?*". Almost 50 papers were presented by economists and statisticians of central banks and international organisations on various topics, such as globalisation, micro data, policy assessment, data dissemination, big data, machine learning etc. The proceedings of the conference were published in the *IFC Bulletin*, no 49.
- **Central banks' access to and use of trade repository (TR) data.** The IFC conducted a survey to assess the consequences of the reforms undertaken after the 2007–09 Great Financial Crisis (GFC) to collect data on the global derivatives market. The results underscored the strong interest in TR data in the central bank community and the significant progress achieved in recent years in collecting and using them. Yet a number of issues remain to be addressed, especially regarding access to these data and their quality.
- **Big data.** Bank Indonesia organised, with BIS/IFC support, a technical workshop and a policy seminar on big data in central banks. This proved a useful opportunity to acquaint participants with new techniques, take stock of the various central bank projects on these topics to better address policy needs, and illustrate recent progress.
- **Fintech.** The IFC set up a working group to analyse the data issues raised by the development of fintech. The group will take stock of user demand for statistics in this area and of projects and experience at IFC member central banks. It will work on statistical definitions and consider different forms of collecting relevant data before formulating recommendations for central bank statistics.
- **External sector statistics.** With the Central Bank of Armenia, the IFC co-organised a workshop to revisit issues related to external sector statistics, the challenges involved in finding appropriate data sources (and possible solutions) as well as those involved in compiling indicators and making use of them.
- **Other international statistical initiatives.** The IFC has continued to support global statistical initiatives in 2018, especially in relation to the implementation of the second phase of the G20-endorsed Data Gaps Initiative (DGI) to be completed in 2021.

In 2019, the Committee will further its work in the various areas outlined above, with a primary focus on completing its fintech initiative – including a dedicated survey of its member central banks. The IFC will also support the 62nd biennial World Statistics Congress (WSC) organised by the ISI in close collaboration with the Central Bank of Malaysia (CBM). In addition to sponsoring several sessions in the main congress, the IFC will also co-organise with the CBM and the ECB two satellite seminars as pre-congress events. Lastly, the IFC will support the African Regional Statistics Conference planned by the ISI.

## Governance and organisation

The IFC is a global network of central bank statisticians, economists 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. Two new members joined the IFC in 2018: the Central Bank of the United Arab Emirates and the Bank of Albania. The Committee now has 91 members – including all BIS shareholder central banks.

The Committee held its annual meeting on 29 August 2018 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 as of March 2019).

The IFC is an affiliated member of the ISI under a memorandum of understanding with the BIS. In addition, a significant number of IFC central banks (28 as at the beginning of 2019) have become ISI corporate members in recent years.

## Main activities in 2018

The IFC organised several activities in 2018 with the support of its member central banks, the ISI and a number of international organisations. These activities centred on the biennial conference of central bank statisticians; trade repositories derivatives data; big data; fintech; external sector statistics; and other issues related to international statistical initiatives. The documents published in this context are listed in Annex 2.

### Biennial conference of central bank statisticians

*“Are post-crisis statistical initiatives completed?”* was the topic of the BIS-hosted ninth IFC conference on 30–31 August 2018, which was attended by almost 150 participants from more than 50 countries. On this occasion, Jiaming Soh from the CBM received the IFC award for the best paper presented by a young statistician, on *“Disentangling the supply and demand factors of household credit in Malaysia: evidence from the credit register”*.

The event proved a useful opportunity for taking stock of the statistical initiatives developed to address the information gaps identified in the wake of the GFC. One challenge is that the related data collection exercises remain unfinished and will take considerable time to be completed, despite the significant efforts already made. A second issue is that new data needs have emerged as a consequence of financial digitalisation and technical innovation. Third, collecting data is a necessary but not a sufficient condition for knowledge, since turning data into useful information requires the effective alignment of statistical collections, data analysis and policy objectives.

In view of these challenges, the following points were seen as particularly relevant for central bank statisticians looking ahead:

- Statistical requirements have to be adapted to meet evolving policy needs and ongoing changes in the financial system. Yet the costs and benefits of new statistical initiatives need to be carefully weighed up: data collections are burdensome exercises that warrant effective coordination as well as careful planning. Evolving data collection and compilation techniques offer new possibilities.

- There are clear potential benefits from ongoing technological innovation. Central banks should actively explore the new opportunities offered by the big data revolution.
- Given limited resources, cooperation both across countries as well as disciplines is crucial, through knowledge-sharing and the exchange of experience. It is also necessary to ensure proper convergence across jurisdictions in terms of data harmonisation, which is a key requirement given the global nature of the financial system.

## Trade repositories derivatives data

The IFC conducted a survey in 2018 on central banks' access to and use of derivatives transaction data being reported to TRs. The aim was to assess the statistical consequences of the reforms undertaken after the GFC to collect data on the global over-the-counter (OTC) derivatives market and how these data are used by public authorities, not least to guide policy actions. The survey accordingly took stock of a number of key aspects of TR data: their policy relevance; their availability and accessibility for central banks; their actual use; remaining information gaps; quality issues; and policy initiatives for improvement.

The results of the survey, published as an *IFC Report*, underscored the strong interest in TR data among central banks and the significant progress achieved in recent years as regards availability, accessibility and quality. Central banks are already using TR data for internal purposes, particularly to support work on financial stability and macroprudential issues. To a lesser extent, TR data are also considered useful in improving market transparency and supporting microprudential supervision.

Yet the report also underlined a number of issues that should be addressed:

- While the coverage of the various segments of the global OTC derivatives market has significantly improved, progress has been primarily limited to FSB jurisdictions in terms of reporting scope and the richness of the information collected. Data availability differs markedly across jurisdictions and appears particularly limited among the smaller ones.
- Significant data gaps remain. In particular, transactions between unregulated entities seem to be difficult to track, and information on key statistical attributes is still incomplete. A key issue is the limited quality of the data reported, so that most central banks have to conduct quality checks – requiring significant resource and time commitments during the in-house processing of the data collected.
- While some central banks have been directly tasked with collecting derivatives transaction data, most of them get this information from the TRs set up separately to collect it. But their access is in practice limited to domestic TRs, and is much more difficult when the data are reported to a foreign TR.
- To meet policy requirements, proper aggregation mechanisms need to be developed for very large and complex TR micro data sets. A major challenge is to reconcile the data collected by different TRs, not least to reconstruct corporate position-level data on a consolidated basis – highlighting the need for global common identifiers. Specific attention should be focused on measuring the activities of central counterparties (CCPs).

- Lastly, the survey emphasised the need for greater coordination at both domestic and international levels, particularly in order to facilitate central banks' access to TRs data, enhance the quality of the information collected, and foster adequate statistics for policymaking.

## Big data

In 2018, the IFC continued to work on facilitating knowledge-sharing and fostering the exchange of experience with big data. Central bank statisticians must deal with new, rapidly developing electronic data sets as well as large and growing financial, administrative and commercial records. This huge volume of financial big data has the potential, in particular, to strengthen analysis for decision-making, by providing more complete and more granular information as a complement to "traditional" macroeconomic indicators. Yet this also poses important challenges for authorities, in handling the data and using them for policy purposes.

Against this backdrop, Bank Indonesia organised with support from the BIS and IFC a workshop on "*Big data for central bank policies*" and a high-level seminar on "*Building pathways for policymaking with big data*" in July 2018. This proved a useful opportunity to take stock of the various pilots conducted by the central bank community in this area and of the growing use of big data analytics and associated artificial intelligence techniques to better address policy needs.

In particular, the conference highlighted the following points of interest:

- Big data is providing new types of data source that can complement more traditional statistics, such as Google searches, real estate and consumer prices displayed on the internet, and indicators of economic agents' sentiment and expectations (eg social media).
- Thanks to IT innovation, new techniques can be used to collect data (eg web-scraping), process textual information (text-mining), match different data sources (eg fuzzy-matching), extract relevant information (eg machine-learning), and communicate or display pertinent indicators (eg interactive dashboards).
- In turn, these new insights can usefully support central bank policies in a wide range of areas, such as market information (eg credit risk analysis), economic forecasting (eg nowcasting), financial stability assessments (eg network analysis), and external communication (eg measurement of agents' perceptions). In particular, the approach can be granular, helping to target specific markets, institutions, instruments and locations (eg zip codes) and, in particular, to support macroprudential policies.

As a note of caution, feedback from central banks consistently highlights the complex privacy implications of dealing with big data, and the associated reputational risks. In addition, most big data applications lend themselves more to explaining what is happening rather than why. As such, they may be exposed to public criticism when insights gained in this way are used to justify policy decisions. Another concern is that, as big data samples are often far from representative (eg not everyone is on Facebook, and even fewer are on Twitter), they may not be as reliable as they seem. Lastly, there is a risk that big data sources may dry up in future as privacy laws evolve and/or market participants change.



## Working Group on fintech data issues

Fintech – understood as technologically enabled financial innovation that could result in new business models, applications, processes or products with an associated material effect on the provision of financial services (Financial Stability Board) – is rapidly modifying the structure of financial markets, eg by fostering new forms of lending, the emergence of cryptocurrencies, and changes in payments systems. These developments affect the whole financial sector, especially banks. In this context, there is increasing interest among central banks to assess the development of fintech (eg global size, market structure, participants), the interlinkages between new fintech firms and traditional financial intermediaries, the development of cryptocurrencies and other operational aspects (eg cyber-security, reputational risks).

High-quality data are needed to assess these issues and the associated financial stability risks – for instance, to measure financial exposures to fintech credit or cryptocurrencies, the evolving market share of “traditional” institutions, the emergence of new market players outside regulatory perimeters, and the operational risks associated with innovation in payment systems. But so far analyses have mainly relied on publicly available sources, exploiting data collected on an ad hoc basis from industry associations. There has been no comprehensive global initiative for compiling public statistics on fintech in a structured way. Moreover, new and unexpected data needs may well arise as financial innovation evolves further.

Against this backdrop, the IFC has set up a working group to analyse the statistical issues raised by the development of fintech and make possible recommendations for central bank statistics. The aim is to take stock of existing data sources and actual uses; assess central banks’ additional information needs; identify key data gaps; assess the costs and benefits of initiatives to address these gaps; clarify the roles and responsibilities of the various parties that could be tasked to design, collect and maintain statistics on fintech; and provide guidance for developing adequate statistical definitions for collecting comprehensive information from a global perspective. As a first step, the working group will survey IFC member central banks to analyse these various aspects and organise a review of their actual statistical experiences and projects.

## External sector statistics

External sector data represent a key element of economic statistics, covering a wide range of topics of interest to statisticians, economists, policymakers and the general public. Yet the collection, compilation, dissemination and use of these data face a number of evolving challenges, which reflect globalisation, new data sources and changing analytical requirements.

Against this backdrop, a workshop was co-organised by the IFC with the Central Bank of Armenia (CBA) in June 2018, the proceedings of which were published in *IFC Bulletin*, no 48. The aim was to discuss issues related to external sector statistics and the challenges faced by central bank statisticians in finding appropriate sources of information, compiling indicators, and making use of them. It was also an opportunity to explore new methodological concepts and techniques and revisit global statistical standards, not least to promote greater data harmonisation and cooperation in the international community.

The workshop highlighted the following messages for central bank statisticians:

- The compilation of external sector statistics can greatly benefit from the use of micro data sets – eg administrative records, registers, surveys – to complement traditional macro-level statistics. Central banks should also keep a close watch on new big data statistics and analysis techniques, not only to work on the “internet of things” and the related unstructured data sets, but also to combine them better with traditional structured data sets, which can be also very large and complex.
- There is an urgent need to address information asymmetries in external sector statistics and to improve data quality. This puts a premium on the expansion of global common identifiers such as the Legal Entity Identifier (LEI) and on using mirror data to validate domestic records, fill gaps in the related data sets and reconcile differences in balance of payments (BOP) and international investment position (IIP) reports. To improve data quality, enterprises and statisticians also need to work together to better understand the different concepts of bookkeeping and statistics and to overcome conceptual and practical problems.
- Specific efforts should in addition be made to better assess the impact of globalisation, in particular the role played by multinational enterprises (MNEs) and special purpose entities, the development of global value chains, and the geographical relocation of corporate assets, particularly intellectual property. Ongoing BIS work in developing nationality-based statistics to complement traditional residency-based frameworks is seen as a key reference from this perspective.
- The various challenges faced by those compiling and using external sector statistics call for greater international cooperation and exchanges of experience, especially among central banks. Further efforts should also be made to promote data-sharing, both nationally and internationally.

### Other work supporting international statistical initiatives

Another significant part of the Committee’s work has been pursued in liaison with international initiatives, especially through BIS’s involvement in the Inter-Agency Group on Economic and Financial Statistics (IAG), which comprises the BIS, the ECB, Eurostat, the IMF (Chair), the OECD, the UN and the World Bank. The IAG was established in 2008 to coordinate statistical issues and data gaps highlighted by the GFC and to strengthen data collection. It was tasked with monitoring progress in the implementation of the action plans related to the second phase of the DGI (2016–21).

Of particular relevance for the IFC agenda are the DGI recommendations related to data-sharing, sectoral accounts, banking and debt securities statistics, cross-border exposures and international data cooperation and communication – especially by supporting the Statistical Data and Metadata eXchange (SDMX) standard developed by the main international organisations as well as the group of central banks involved in the International Network for Exchanging Experience on Statistical Handling of Granular Data.

In addition, IFC member central banks are actively involved in the compilation and dissemination of both residential and commercial property prices, another important area of international work in the context of the DGI. From this perspective, the IFC helped to support the Central Bank of the Republic of Turkey in organising an international workshop on commercial property price indices in Cappadocia, Turkey, on 7–8 May 2018.

The IFC also contributed to work on financial inclusion, by publishing last year a dedicated *IFC Bulletin*, no 47 on the role of data in supporting financial inclusion policy. This proved a useful opportunity to review central banks' experience in compiling statistics for effective policy implementation to promote financial inclusion. Lastly, the IFC continued to play its role as a hub for responding to specific central bank requests for information- and experience-sharing.

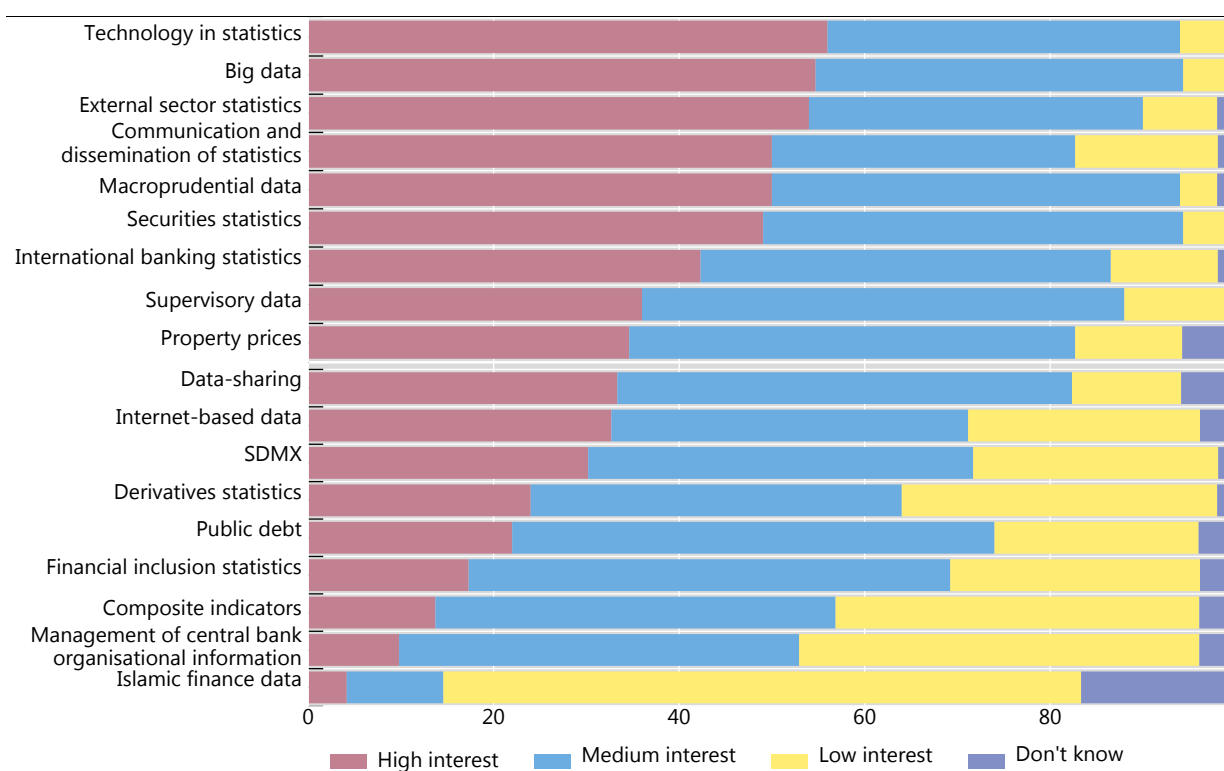
## 2018 survey of IFC membership

In addition to a specific section on TR derivatives data (see above), the 2018 IFC membership survey also gathered feedback from members on IFC activities, governance issues, and suggestions for future work.

### Membership survey: IFC activities – Which topic would be of interest to your institution?

In per cent

Graph 1



Source: IFC membership survey, 2018.

The results showed that central bank participation in IFC events remains strong and suggested that the Committee is fulfilling its mandate appropriately. As regards the IFC work programme (Graph 1), the survey underlined that Committee members are most interested in (i) data management issues (eg technology in statistics, communication and dissemination); (ii) big data (with medium interest shown vis-à-vis internet-based data sets); (iii) external sector statistics; (iv) data for macroprudential policies; and (v) “traditional” BIS statistics – ie debt securities, international banking statistics, and, to a lesser extent, supervisory data and property prices. Interest was less strong in a number of topics already explored actively by the

Committee in the recent past, such as data-sharing, derivatives statistics, SDMX and financial inclusion. This feedback will help in the preparation of the Committee's future activities.

## Looking ahead

In 2019, the IFC will further its work in the areas of big data, fintech data issues, micro-level statistics and financial accounts as well as on the various aspects of the DGI that are relevant to the central banking statistical community.

In particular, the Committee actively supported preparations for the workshop on *"Computing platforms for big data and machine learning"* held at the Bank of Italy in January 2019 and will co-organise with the Central Bank of the Republic of Turkey a workshop on *"The use of financial accounts"* in March. It is also preparing with the ECB and the Bank of Portugal a joint workshop in the area of external statistics in early 2020.

In addition, the IFC will continue to support the activities of the ISI, which is planning to extend its outreach to Africa by organising a dedicated regional statistics conference in Tanzania towards the end of 2019, in coordination with the relevant central banks.

A major event will be the 62nd biennial WSC to be organised by the ISI – in close cooperation with the CBM – in Kuala Lumpur, Malaysia, on 18–23 August 2019, during which the IFC will sponsor several sessions on the measurement of MNE activities; commercial property markets; data-sharing; communication between users and compilers of statistics; central bank communication in the digital age; financial accounts and macroeconomic balance sheets; micro data sets; and data standardisation. One specific session will be organised in coordination with the Centre for International Research on Economic Tendency Surveys (CIRET) on *"Short-term surveys, big data and inflation"*. Another one will be organised with the ISI on *"Official statistics: challenges and opportunities in NSOs and central banks"*.

Lastly, the IFC will organise two satellite seminars on *"Post-crisis data landscape: micro data for the macro world"* (jointly with the CBM and the ECB) and *"Statistics on fintech – bringing together demand and supply to measure its impact"* (jointly with the CBM) in the context of the WSC. These events will provide an opportunity to further deepen the dialogue among central bank statisticians, their counterparts in national statistical offices and international organisations, and academia.

## Annex 1

### Members of the IFC Executive as of March 2019

<b>Executive member</b>	<b>Institution</b>	<b>Term</b>
1. Ms Claudia BUCH (Chair)	Deutsche Bundesbank	2016–19 <sup>1</sup>
2. Mr TOH Hock Chai (Vice-Chair)	Central Bank of Malaysia	2015–20
3. Ms Carol BERTAUT	Board of Governors of the Federal Reserve System	2018–21
4. Mr Fabrizio LOPEZ GALLO	Bank of Mexico	2018–19
5. Ms MOON So Sang	Bank of Korea	2019–21
6. Mr MORI Naruki	Bank of Japan	2018–21
7. Mr Olorunsola Emmanuel OLOWOFESO	Central Bank of Nigeria	2014–19
8. Ms Gloria PENA	Central Bank of Chile	2019–21
9. Mr Fernando Alberto ROCHA	Central Bank of Brazil	2018–21
10. Ms Gülbin SAHINBEYOGLU	Central Bank of the Republic of Turkey	2017–19
11. Ms Silke STAPEL-WEBER	European Central Bank	2019–21

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<sup>1</sup> Three-year period starting 12 September 2016.

## Annex 2

### IFC publications in 2018

January	<i>IFC 2017 Annual Report</i>
May	<i>IFC Bulletin</i> , no 47: Proceedings of the Bank of Morocco-CEMLA-IFC Satellite Seminar on “The role of data in supporting financial inclusion policy”, co-organised with the Bank of Morocco and the Center for Latin American Monetary Studies (CEMLA) at the 61st ISI World Statistics Congress, Marrakesh, Morocco, 14 July 2017
October	<i>IFC Report</i> on central banks and trade repositories derivatives data (results of the IFC survey finalised in 2018 on central banks’ access to and use of derivatives transaction data being reported to trade repositories)
October	<i>IFC Working Papers</i> , no 17: “Disentangling the supply and demand factors of household credit in Malaysia: evidence from the credit register”, by Jiaming Soh, Central Bank of Malaysia
October	<i>IFC Working Papers</i> , no 18: “INEXDA – the Granular Data Network”, by members of the INEXDA network
November	<i>IFC Bulletin</i> , no 48: Proceedings of the IFC-Central Bank of Armenia workshop on “External sector statistics – current issues and new challenges”, co-organised with the Central Bank of Armenia, Dilijan, Republic of Armenia, 11–12 June 2018