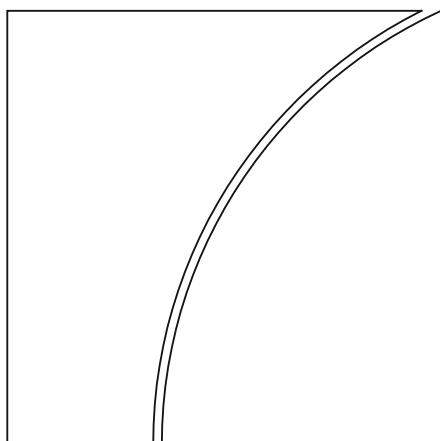Irving Fisher Committee
on Central Bank Statistics

2022 IFC Annual Report

January 2023

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).

Contents

2022 Annual Report of the Irving Fisher Committee on Central Bank Statistics

On 9 January 2023 the BIS All Governors' meeting approved the publication of the 2022 Annual Report of the Irving Fisher Committee on Central Bank Statistics (IFC). It provides a brief update on the IFC's governance and a review of its main workstreams, including planned initiatives.

Executive summary

As a global network that discusses and develops statistical issues of interest to central banks, the IFC now has 98 members and is an affiliated member of the International Statistical Institute (ISI). It is chaired by Pablo García, Vice Governor of the Central Bank of Chile.

One notable feature last year was the decision to **host the central bank network on historical monetary and financial statistics** (HMFS) under the IFC umbrella. This group brings together central bank statisticians and academic experts to focus on long-run historic monetary and financial data that are relevant to policymakers.

Another important development for the Committee was related to the **international cooperation framework under the Data Gaps Initiative (DGI)** endorsed by the G20. The IFC has continued to actively support the remaining work decided in response to the Great Financial Crisis (GFC) of 2007–09 and to help to coordinate national work on financial data sets. It is also contributing to the new phase of the DGI initiated in 2022 that calls for better data to understand climate change, income and wealth, financial innovation and inclusion, and access to private and administrative data and data-sharing, to make official statistics more detailed and timely.

In addition, IFC member central banks and the BIS have been actively participating in the **ongoing revision of the international statistical manuals** (covering the System of National Accounts (SNA) and balance of payments (BPM)) and supporting the global legal entity identification (LEI) system and the Statistical Data and Metadata eXchange standard (SDMX).

The main areas covered by the IFC last year, thanks to the support of its member central banks, the ISI and a number of international organisations, centred on:

- **Post-pandemic landscape for central bank statistics**: the Committee continued to update its web page for Covid-19 statistical resources, which details related official projects and relevant experiences. Moreover, the IFC 11th biennial Conference held in August 2022 was an opportunity to reflect on the new normal for official statistics looking forward.

- **Managing (big) data**: the IFC furthered its analyses of the use of big data in central banks and on the contribution that machine learning (ML) in particular can make. In addition, the Committee has set up recurrent workshops on "Data science in central banking" to review developments in the big data ecosystem and the ongoing adoption of data analytics.

- **Governance of official statistics including communication issues**: the Committee has promoted the establishment of strong data governance

standards and co-organised with Banco de Portugal a conference focusing on communication in official statistics.

- **Fintech**: IFC work has continued to document how fintech is transforming the financial landscape, creating a number of challenges for statisticians. The Committee also participated in the related global consultation on the revised structure of the International Standard Industrial Classification.

- **Sustainable finance**: the IFC has launched a number of initiatives on sustainable finance, including a publication in 2022 on the development of statistics in the environmental, social and governance (ESG) area.

In 2023, the IFC will continue to promote knowledge-sharing and international cooperation on statistics-related methodologies, initiatives and training, reflecting the important role played by central banks in the production of official statistics. To this end, the eBIS-restricted network on statistical methodological issues has been complemented by the launch of a dedicated **public IFC knowledge centre webpage** that includes guidance notes and related methodological and training information.

In addition, the Committee will further its work in the various areas outlined above, and a **number of events** will be organised in this context with the support of the central banks of Canada, Italy and South Africa. A major one will be the ISI's 64th biennial World Statistics Congress (WSC) in Canada.

Governance of the Committee

Governance and organisation

The IFC is a global network of central bank statisticians, economists and policymakers who discuss statistical issues of interest to central banks and develop related methodological work. Its activities are overseen by the BIS All Governors' Meeting.

The Committee's institutional members comprise central banks and international and regional organisations formally involved in central banking issues. The Central Bank of Costa Rica and the National Bank of Georgia joined the IFC as new members in 2022. The Committee now has **98 members**, including all BIS shareholder central banks.

The IFC is an affiliated member of the ISI under a memorandum of understanding with the BIS and also became a member of the International Association for Official Statistics (IAOS) in 2022. In addition, a significant number of IFC central banks (about one third) have become ISI corporate members in recent years. The IFC will continue its involvement in ISI activities in 2023, especially on the occasion of its biennial WSC (see below).

On 9 May 2022, in accordance with the IFC statutes, and following consultations with central banks, the BIS All Governors' Meeting formally endorsed the proposal to **elect Pablo García, Vice Governor of the Central Bank of Chile, as the new IFC Chair** for a three-year period, starting on 12 September 2022. The term of Rashad Cassim, former Chair of the IFC and Deputy Governor of the South African Reserve Bank (SARB), ended on 11 September 2022.

The Committee held its annual meeting on 24 August 2022 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 1 January 2023).

The central bank network on historical monetary and financial statistics

One important Committee decision last year was to **host the HMFS central bank network under the IFC umbrella**. This network brings together central bank statisticians and academic experts to focus on long-run historic monetary and financial data that are relevant to policymakers. The aim is to provide a forum where statisticians, policymakers, economists and historians can discuss approaches to historic data and learn from each other. The group has two guiding principles. One is the importance of comparability of statistics across countries and time. The other is the value of transparency in how those statistics are produced, highlighting their strengths and limitations and paving the way for improvements over time.

An HMFS webpage has been accordingly set up on the IFC site to provide detailed information on the network composition, relevant data sets and country contributions, and general documentation – including a dedicated BIS Paper on "Historical monetary and financial statistics for policymakers: towards a unified framework", which was published to mark the webpage launch.

IFC involvement in global statistical initiatives

The G20 Data Gaps Initiative

Important aspects of the Committee's work are taking place in the context of the **international statistical cooperation framework to close data gaps**, especially through the 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 United Nations (UN) and the World Bank.

With the support of the Financial Stability Board (FSB), the IAG had been tasked to monitor progress in implementing a number of recommendations related to the **DGI initiated after the GFC**. The main goal was to enhance existing core official statistics information, especially as regards timeliness, frequency and international comparability, and to participate in the general improvement of the global statistical infrastructure. The IFC is supporting the lead international organisations (especially the BIS) in the context of their associated work programmes and monitoring exercises, as documented on the IMF-maintained DGI webpage. Three main factors have been instrumental here: the structured collaboration set up between international organisations and national statistical systems (NSSs); the close connection with current official priorities, with annual reporting to policymakers and prioritisation of the related implications for official statistics; and the peer pressure mechanism for spurring the involvement of G20 national authorities as well as other interested jurisdictions.

The IFC will support two important workstreams looking ahead. First, despite the progress made, there are remaining challenges for fully closing the data gaps related to some recommendations of the **second phase of the DGI** formally completed in 2022. Of particular interest to the central banking community is the required follow-up work on securities financing transactions, securities statistics, sectoral/financial accounts, international investment positions, international banking statistics, cross-border exposures, public sector debt and property prices. Implementation will continue to be monitored annually.

Second, IAG members have been working with major economies on a **new five-year phase of the DGI,** which was backed by the G20 Leaders in November 2022. The associated workplan covers 14 specific recommendations addressing priority policy needs in the areas of (i) climate change; (ii) distribution of household income and wealth; (iii) fintech and financial inclusion; and (iv) access to private and administrative sources of information and data-sharing.

Other international initiatives

The Committee supports **global efforts to revise international statistical manuals**, ie for the SNA and the BPM. This revision work has benefited from the contribution of a number of central banks and the BIS in the elaboration of so-called guidance notes – progress on the related updates, including the list of the various task teams involved and the material produced, is available at "Towards the 2025 SNA" and "Update of the sixth edition of the balance of payments and international investment position manual (BPM6)".

Another notable initiative for enhancing the international statistical infrastructure relates to the **Global LEI system**. In liaison with the Committee on the Global Financial

System (CGFS), the IFC is now being represented as an observer in the <u>LEI Regulatory Oversight Committee</u> (ROC), which involves financial markets regulators and other public authorities and observers from more than 50 countries and is tasked to coordinate and oversee the LEI and its wider adoption. Of particular interest for IFC members is the ROC's involvement in enhancing the quality of the LEI and broadening its coverage for the benefit of financial data reporting, improving the ability to monitor financial risk, and lowering regulatory reporting costs through the harmonisation of the related standards across jurisdictions.

The IFC also supports **the <u>SDMX</u> standard** sponsored by the members of the IAG. This ISO standard is now widely used by international organisations, NSOs, and other data-producing agencies to streamline the transmission of data and strengthen their dissemination through the design of appropriate Data Structure Definitions (DSDs). The BIS has also recently deployed an SDMX web service and coordinated the publication of the SDMX version 3.0, developed in 2021, which makes it easier to handle large micro data sets and new "alternative" types of data. To further widen the adoption of this standard, the international community will promote and further develop reference implementations of the latest SDMX version and publish them as open source software goods. Furthermore, the SDMX User Forum was launched to provide a platform for knowledge-sharing, problem-solving and collaboration aimed at beginners as well as experienced users such as data modellers and system developers. This forum is designed as a space to generate ideas, receive feedback and access information on case studies and implementation scenarios. Lastly, the IFC will conduct a dedicated membership survey in 2023 to review the development and prospects of the SDMX standard.

Main ongoing IFC workstreams

The IFC furthered its work in several key areas in 2022, leveraging the support of its member central banks, the ISI and a number of international organisations. Its activities centred primarily on the outlook for central bank statistics after the Covid-19 pandemic; the management of (big) data; governance and communication; fintech; and sustainable finance. The related publications are listed in Annex 2.

Central banking statistics after Covid-19

Despite the recent easing in the global health situation, the Covid-19 pandemic has continued to pose significant challenges for central bank statisticians. It also underlined the need to draw useful lessons to guide the development of official statistics looking forward. The Committee contributed to this review by regularly updating its **dedicated web page for** <u>Covid-19 statistical resources,</u> which highlights related official projects and documents the experience of central bank statisticians.

These insights were presented at the ninth Meeting of the Steering Committee of the Arab Statistics Initiative ("**Arabstat**") in November 2022. One lesson is that coping with the shifts in user demands triggered by unprecedented shocks such as pandemics requires tapping into new information sources, often held by private actors and government agencies. Moreover, the wider use of artificial intelligence (AI) techniques in the compilation phase and standardised data publication and international data-sharing in the distribution phase could transform the whole production chain of official statistics, making it faster and more resilient and user-friendly. Third, the way forward should benefit from international cooperation to spur

knowledge-sharing and the exchange of best practice. This can be instrumental to, for instance, facilitating access to privately-held data and administrative registers, especially in times of acute disruptions in official statistics, as seen during 2020–21.

More generally, it is important to reflect on **what the new normal would look like** after the pandemic, taking note of central banks' dual role as both compilers and users of official statistics. This was the main theme addressed by the IFC 11th biennial conference held in hybrid mode at the BIS on 25–26 August 2022 and attended by almost 170 participants from 60 countries. On this occasion, Vittoria La Serra and Emiliano Svezia from the Bank of Italy received the IFC award for the best paper presented by young statisticians, on "Statistical matching for anomaly detection in insurance assets granular reporting".

The various Conference presentations underlined **four general main messages**. First, there is no such thing as a rigid, unchanging statistical framework. Statisticians need to continuously adapt their sources and tools to evolving challenges, to eg capture the long-term consequences of the pandemic, assess the sustainability of economic development, and track the global footprint of international firms. Second, technological innovation opens up new perspectives, especially to facilitate the use of data that are available "organically" (ie independently of "designed" traditional statistical compilation exercises such as surveys and censuses) and to spur research using very granular but confidential data sets. Third, the demand for timely, high-quality and varied statistical data is likely to remain high, calling for flexible statistical frameworks that can be adapted to meet evolving policy objectives and user needs. Fourth, central banks' statisticians have proved particularly agile, responsive and innovative, further consolidating their essential contribution to the NSS.

Managing (big) data

IFC analyses have long documented that central banks are increasingly working with big data, which has become a significant focus even at the senior policy level. The Committee continued to expand its work in this area in 2022, in particular with the publication of a working paper reviewing the **use of big data in Asian central banks**. This publication revealed, first, that Asian central banks define big data in a more encompassing way, which includes unstructured and non-traditional as well as structured data sets. Second, interest in big data appears greater in Asia, including at the senior policy level; the focus is chiefly on projects developed to process natural language, conduct nowcasting/monitoring exercises, and develop applications to extract economy insights as well as suptech/regtech solutions. Third, Asian central banks say that they are dealing with big data to support a wide range of tasks. Fourth, big data poses new challenges, with specific attention paid in the region to cyber security and data strategy. As a result, there is a growing need for international policy cooperation, especially among public authorities in Asia to facilitate the use of payments data and promote innovative technological solutions.

The Committee also published a Bulletin that took stock of how central banks are **developing machine learning** (ML) across a variety of use cases. This illustrated the importance of the new techniques in improving the efficiency and effectiveness of central banks' related operations, including by increasing their availability to deal with larger and new sources of information in a more automated way. It also underlined the diversity and maturity of ML approaches already developed and used, reflecting their potential and usefulness for central banks in dealing with the increasingly complex environment in which they operate.

To start with, **the new techniques can facilitate the gathering of more and better information, which is key for central banks that rely heavily on data**. ML can help respond to this demand by enhancing the data quality and by providing richer context. In addition, a key issue is to make sense – in a reasonably fast and largely automated fashion – of the wealth of data available to derive useful conclusions; indeed, ML can greatly contribute to the modelling of economic and financial problems and the related statistical exercises. In turn, the lessons gained can effectively support evidence-based policies. This is obviously the case regarding monetary stability, not least in terms of better understanding the drivers of policy decisions. Similarly, applying ML in suptech can be instrumental in helping financial supervisors to perform their oversight tasks. Turning to the macroprudential area, ML has been increasingly used to interpret information from various, often unrelated data sources to assess system-wide vulnerabilities. Moreover, the new techniques can be used for other financial stability-related goals, including the functioning of the payment system, financial inclusion, consumer protection, anti-money laundering and the secure printing of money.

At a more practical level, several lessons and observations could apply to the deployment of ML-based tools in central banks. First, there is a wealth of alternative information sources that have barely been tapped and which can provide new and useful insights. Second, complementarity is essential: ML methods can bring additional insights to traditional approaches but have to be blended with other types of exercise as well as with strong business expertise. Third, there are benefits to calibrating many ML tools, not just one, since combining different approaches can lead to better results and mitigate the risk of model overfitting. Fourth, there is merit in following a pragmatic and gradual approach when implementing the new tools: a rather varied set of methods can be considered, and it is important to carefully assess them before actual deployment. Fifth, more data are often better than increasing the sophistication of the models. Sixth, while ML can be instrumental in dealing with complexity, there is also a risk of developing black box solutions that would compound the challenges faced by users as their functionality is rarely intuitive. The focus should therefore be on the interpretability of the results obtained and on addressing well defined use cases. Lastly, ML exploratory work has sometimes barely started, and substantial staff and IT investment as well as business adjustments will continue to be needed to make the most of the new techniques, computing equipment and data. Addressing these issues will need central banks' current operational processes and collaboration models to be modified further – with close cooperation between core IT experts, data scientists and business specialists.

Lastly, the Committee has continued to **organise recurrent workshops on "Data science in central banking"** with a broad audience of practitioners and technicians to review the ongoing adoption of data analytics and business intelligence techniques and developments in the big data ecosystem. The main objective is to showcase projects and share experience that can help to develop in-house knowledge and reduce the reliance on external services providers. One workshop organised with the Bank of Italy at the BIS in February 2022 focused on the broad spectrum of data science applications/tools used in central banks. Another workshop is planned for Rome later in 2023 to deal, in particular, with issues related to the access to private and administrative sources and data-sharing.

Governance of official statistics including communication issues

The public organisations that underpin NSS, especially central banks' statistical departments, are increasingly aware of the **importance of strong data governance standards**, considering in particular the challenges posed by accessing non-traditional sources and using new techniques. Central bank statisticians have contributed substantially to these issues in recent years, and one IFC Executive member was nominated to represent their views within the ISI Advisory Board on Ethics. This Board advises on relevant ethical issues, promotes the observance of existing ethical principles in statistics and reviews their content to ensure that they are relevant to newer forms of data science. In addition, the IFC has been invited to represent the central banking community in the dedicated Task Force set up by the UN Economic Commission for Europe (UNECE) to prepare an international report on the data stewardship and the role of national statistical offices (NSOs) in the new data ecosystem.

Obviously, the concept of governance in official statistics refers to a wide range of issues, from data management to the techniques involved and also to the user side – for instance, to ensure that the data are fit-for-purpose and that their value is maximised. From this perspective, a major point of attention relates to **communication**. Central banks, like other compilers of official statistics, are well aware of the need to share with users, in a clear and understandable way, a comprehensive picture of the analytics provided, including the degree of uncertainty associated with the data and techniques used. This puts a premium on developing statistical literacy in the population, and on ensuring that the public understands and accepts what official statisticians are doing. After successful sessions on statistical communication at the ISI's 2021 WSC and the 2022 IFC biennial conference, the Committee co-organised with Banco de Portugal the first conference dedicated to the topic of "Communication on central bank statistics: unlocking the next level" in Lisbon in September 2022. One goal was to share experience on how to start a statistical communication function in terms of targets, channels and contents and to create the team in charge of the related tasks. Another objective was to reflect on reaching and engaging with different target groups, with a focus on the various channels available. The conference discussions benefited from the insights gained through a survey organised in 2022 among IFC members on the communication of central bank statistics.

Looking forward, the IFC intends to further its work on data governance and communication issues, especially on the occasion of the programme of the third ISI Regional Statistics Conference to be held in Zambia in April 2023. This event will also be an opportunity for the IFC to extend its outreach to **Africa** in coordination with the relevant central banks.

Fintech

Extensive IFC work in recent years has documented how **fintech, or technological innovation used to support or provide financial services,** is developing rapidly, transforming the financial landscape and creating a number of challenges for central bank statisticians. This work also highlighted the need to adapt statistical standards to better address the challenges posed by digital innovation in finance through the correct identification of the related fintech providers. Some of the services they offer are new forms of previously existing activities (eg credit intermediation by non-banks) that have been pushed by technology to new orders of magnitude in terms of

importance and size. In contrast, other genuinely new activities, such as no-liability cryptoassets and tokenisation of financial instruments, are often assigned to the IT sector, despite their major role in financial intermediation and their importance for financial stability.

To address these issues, the IFC has been participating in the UN-organised **Global Consultation on the revised structure of the International Standard Industrial Classification** (ISIC) of All Economic Activities. The main proposal put forward by the Committee in 2022 was to establish new classes for identifying specific key fintech activities, noting that empirical investigations have clearly illustrated the importance of these classes in terms of the number of enterprises and turnover. This calls for the following action points:

- Novel activities, such as no-liability cryptoassets, crowd-funding operations, tokenisation of financial instruments, new forms of supply chain financing, robot financial activities and paytech, may be considered for allocation to a dedicated sub-item in the "Financial and Insurance Activities" group.

- Fintech credit, if not part of the above-mentioned items, could be made identifiable in "Other monetary intermediation" (licensed neobanks) or in "Other credit granting" (unlicensed neobanks), respectively.

- There are pre-existing activities carried out in a novel way – eg auxiliary online banking/digital banking (banktech); insurtech; and pensiontech – that, due to their increased importance, should be distinguished from broader activities.

- Fourth, there are other activities done in a novel way that do not necessarily require a dedicated sub-item but would benefit from the development of adequate standard's explanatory notes so as to be classified correctly and in an internationally harmonised way.

- Given their importance for the financial system, specific suptech/regtech-related activities could be classified in wider groups but need to be clearly identifiable.

Lastly, Committee members will continue to work on fintech data issues under the **new phase of the DGI**, under which fintech and financial inclusion has been identified as one of the four main statistical and data priorities (see above). In particular, IFC members' experience would be leveraged to cover topics such as the monitoring of fintech activities, the analysis of the development of central bank digital currencies (CBDCs) and different types of cryptoasset, and the assessment of financial inclusion and access through new digital instruments and services.

Sustainable finance

The IFC has launched a number of **initiatives on sustainable finance data issues** in recent years, in close coordination with other international bodies including the Network of Central Banks and Supervisors for Greening the Financial System (NGFS). This work has already led to a list of about 100 ESG metrics considered of particular relevance by central banks, a stocktake of core documentation references and the identification of key recommendations to guide work on sustainable finance statistics. All this material is available on the IFC website.

To shed additional light on these issues, the IFC published a Bulletin in 2022 on "Statistics for Sustainable Finance", which reviewed the **progress achieved** so far in developing sustainable finance statistics. A specific focus was put on the financial risks that have been rising in parallel with the growing threat of climate change,

highlighting the urgent need to make available relevant data on a timely basis. Central banks have been at the forefront of the efforts to identify core climate-related information gaps, and the Bulletin emphasised five important points to consider in this regard:

- First, **central banks and financial supervisors have an important role to play in developing sustainable finance statistics**. Their main focus has been on establishing analytical frameworks, designing sustainability indicators and actual monitoring. This has allowed existing data shortages to be identified, including the lack of granular firm/asset-level data to meaningfully measure the carbon footprint of economic and financial activities and the need to establish forward-looking data (eg emission pathways). Relatedly, there is a lack of harmonised standards and methodologies, which can give rise to undesirable incentives and lead to misleading interpretations. A specific goal is to establish a comprehensive statistical framework for capturing the external costs of greenhouse gas emissions, which is a precondition for ensuring that climate-related risks are incorporated by market participants and that capital is efficiently allocated to sustainable activities.

- Second, **central banks/supervisors have become key users of sustainable finance data**. One reason is that global warming and the green transition are affecting a wide range of their policies, in particular in terms of financial stability objectives. Sustainability issues are also relevant for central banks' reserve management tasks and for the conduct of monetary policy. Reflecting these various use cases, central banks are in the process of setting up increasingly detailed data sets. They also rely on commercial data providers, but combining these various sources raises challenges in terms of coverage, reliability and consistency.

- Third, **addressing sustainable finance data gaps requires careful prioritisation**. In the medium to long run, there is a clear need for more comprehensive data sets, with greater consistency and quality. But the promotion of common international standards is an urgent prerequisite for the efficient development of adequate statistical definitions and classifications (or "taxonomies"). Common standards would also ensure that the collected data are articulated with policy objectives and subject to proper disclosure requirements – which is the key to guiding investors and pricing the related risks effectively.

- Fourth, **more and better cooperation between stakeholders is required, including enhanced data-sharing**, especially with the private sector and academia, and between jurisdictions. Such cooperation is needed for taking stock of useful statistical initiatives, promoting best practice, and identifying novel climate-relevant indicators. Data-sharing is also essential more generally for ensuring the broadest possible data availability in the most efficient way, while keeping the reporting burden under control.

- Lastly, **exploiting less conventional sources and tools might be an important way of bridging existing data gaps**. Innovative text-mining techniques can, for instance, help to extract relevant information from firms' climate-related disclosures. Similarly, AI approaches can be used to better monitor and understand the development of sustainable finance. Needless to say, substantial investments, especially in terms of IT hardware, software and staff skills are required to support such initiatives.

Committee members will continue to work on data issues related to **climate change under the new phase of the DGI** (see above). The central banking community will in particular be able to contribute to two important recommendations. One is to foster the development of physical and transition risk indicators that are critical to understanding both the effects and the risks of climate change on the economy and the financial system. Another is to support the provision of methodological guidance and more comparable indicators for green finance (ie debt and equity financing) in the context of the work of the international Working Group on Securities Databases (WGSD), which has been tasked with improving information on securities markets.[1] One important event from this perspective will be the international DGI workshop planned to be organised by the WGSD in South Africa at the end of 2023, with the support of the IFC and the SARB.

IFC as a knowledge centre

Statistical methodology and training

A key goal of the IFC is to promote knowledge-sharing and international cooperation on statistics-related methodologies, initiatives and training. This reflects the important role played by its members in the production of official statistics. To this end, the newly established eBIS-restricted network on statistical methodological issues was complemented last year by the launch of a **public IFC knowledge centre webpage**. The aim is to showcase the experience of central banks in pursuing statistical production work in specific domains and facilitate public access to related methodological material, other relevant initiatives and training opportunities.

As regards first methodological issues, central bank practitioners as well as data users have expressed interest in receiving guidance on how international statistical standards should be implemented in practice. The IFC can respond to this call by leveraging the experience of its members to publish short and simple **guidance notes** – eg the first note published in November 2022 on the treatment of captive financial institutions and money lenders. More informally, and at the request of any of its members, the Committee also provides a reliable platform for sharing among fellow central banks detailed restricted information on the practical handling of specific methodological issues. The topics addressed in this context in 2022 covered a wide range of areas, including:

- data strategy and governance;
- business intelligence systems and central bank statistics;
- data domains and statistics strategy;
- time series data analysis;
- alignment of external accounts and Rest of the World (ROW) sector in institutional sector accounts;
- central register of bank accounts;
- framework for institutional sector accounts;

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[1]   The core members of the WGSD are the BIS (Chair), the ECB and the IMF.

- business tendency surveys;

- business intelligence systems and central bank statistics; and

- implementation of a credit register.

Another key initiative relates to **financial accounts**, an essential element of the SNA, which central banks are responsible for compiling in many countries. In view of the strong demand from central bank staff for learning opportunities in this area, the Committee has been supporting the development by the OECD/Sapienza University in Rome of an online course on macroeconomic financial accounts with Coursera, the US-based massive open online course (MOOC) provider. The project draws on the OECD's "Understanding financial accounts" manual, to which several IFC members have contributed. The BIS/IFC, the ECB and the Bank of Italy are acting both as funding sponsors of the project and as members of its scientific committee. The first part of the course, a general introduction on financial accounts and balance sheets within the SNA, was launched in January 2022 and has been already followed by more than a thousand participants. The sponsors have also started the development of the second part of the course, to cover the understanding of financial markets and institutional sectors, and the IFC has agreed to support the production of its third part in 2023 (on the use of financial accounts as a toolbox for economic analysis).

In the training area, the Committee also continues to sponsor, together with a number of central banks, the **postgraduate programme in Statistical Systems with a specialisation in Central Banks' Statistics**, as developed by the NOVA Information Management School (NOVA IMS) of Universidade Nova de Lisboa in collaboration with Banco de Portugal. Moreover, the IFC is serving as a platform for its members to access relevant material developed in the context of the **European Master in Official Statistics** (EMOS) network arranged by the European Statistical System Committee.

Cooperation with other international groups

The IFC supports general statistical cooperation among the international organisations regrouped within the **CCSA**, the inter-agency Committee for the Coordination of Statistical Activities. One notable event in 2022 was the joint publication of a freely accessible special issue of the Statistical Journal of the IAOS on international official statistics. This publication took stock of the role and diversity of CCSA members' statistical contributions, including the overview of the background and history of the group, its role in the governance of the global statistical system and in capacity-building, and its involvement in the development of standards, coordination, production and dissemination of comparable statistics as well as methodological innovation.

The Committee also greatly values cooperation with a number of bodies working in more specialised areas. On example is the support of IFC members and its Secretariat for the activities of the Centre for International Research on Economic Tendency Surveys (**CIRET**), as seen in the sharing last year of central banks' experience on the impact of Covid-19 on official statistics.

Another key initiative to promote knowledge-sharing is on micro data issues with the group of 13 central banks involved (as members or observers), together with a number of NSOs and international organisations, in **INEXDA,** the International Network for Exchanging Experience on Statistical Handling of Granular Data. The IFC has energetically supported its work, which comprises the development of a metadata schema to describe granular data sets from different countries, the review of best

practices for granting access to open software solutions and data, and the identification of common features across jurisdictions with a view to the potential harmonisation of data access procedures. The BIS also organised a joint INEXDA session at its 11th biennial conference and is providing eBIS as a platform for internal communication in the network.

A second fruitful cooperation in the micro data domain relates to the European Committee of Central Balance Sheet Data Offices (**ECCBSO**), which is a consultative body with more than 30 member institutions. It was set up by a group of central banks to improve the analysis of non-financial corporate enterprises data through the exchange of information and joint studies. Several IFC members contribute actively in this work programme, in which the Committee is also participating as an observer.

2023 ISI World Statistics Congress

A major opportunity to promote statistical knowledge-sharing among central banks and beyond will be the **64th biennial WSC to be organised in Ottawa by the ISI** – in cooperation with the Bank of Canada – on 16–20 July 2023. The IFC will sponsor seven sessions, on sustainable finance, evolving statistics in support of central bank policies, financial innovation, communication, data governance in official statistics, data science and commercial real estate indicators.

Moreover, one additional session will be organised in coordination with INEXDA on the present and future of access to granular administrative data. Lastly, the Bank of Canada and the IFC will jointly arrange a **satellite seminar on "Granular data: new horizons and challenges for central banks"** in the context of the Congress. All these events will provide an opportunity to further deepen the dialogue between central bank statisticians, their counterparts in NSOs and international organisations, and academia.

Annex 1

Members of the IFC Executive as of January 2023

Executive member	Institution	Term
Pablo García (Chair)	Central Bank of Chile	2022–25[2]
Yakubu Aminu Bello	Central Bank of Nigeria	2021–25
Elizabeth Holmquist	Board of Governors of the Federal Reserve System	2022–24
Robert Kirchner	Deutsche Bundesbank	2020-25
Ko Nakayama	Bank of Japan	2020–24
Li Ming Ong	Central Bank of Malaysia	2020–23
Gloria Peña	Central Bank of Chile	2019–24
Fernando Alberto Rocha	Central Bank of Brazil	2018–24
Eyal Rozen	Bank of Israel	2021–23
Silke Stapel-Weber	European Central Bank	2019–24
Luís Teles Dias	Banco de Portugal	2022–24

[2]   Three-year period starting 12 September 2022.

Annex 2

IFC and related publications in 2022

January	*IFC 2021 Annual Report*.
February	*IFC Working Paper*, no 21, "Big data in Asian central banks".
May	*IFC Bulletin*, no 56, "Statistics for sustainable finance".
September	*BIS Papers*, no 127, "Historical monetary and financial statistics for policymakers: towards a unified framework".
October	*IFC Working Papers*, no 22, "Statistical matching for anomaly detection in insurance assets granular reporting".
November	*IFC Bulletin* no 57, "Machine learning in central banking".
	IFC Guidance Note, no 1, "The statistical treatment of captive financial institutions and money lenders".
December	*IFC Guidance Note*, no 2, "Interest rate policy and anti-usury regulations".