FINANCIAL INFORMATION FORUM OF LATIN AMERICAN AND CARIBBEAN CENTRAL BANKS

Statistics dissemination: Principles and Practices

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Final Report of Financial Information Forum Working Group 4 (FIF-WG4)

April, 2016

Introduction

Statistics are fundamental for economic and financial analysis. The availability of timely and reliable data contributes to a correct assessment of the current state of the economy and sound policy decision-making. Consequently, statistics must be credible, reliable, precise, significant, and accessible, and they must be communicated in such a way that the main results can be understood without requiring specialized knowledge. In this area, one of the main challenges for central banks and other official agencies that provide statistics is how to guide users so that they can find what they are looking for. In this context, the efficient diffusion of statistics plays a preeminent role in the economy and is a key element in today's society.

Dissemination, as a general concept, has a much broader objective than simply publishing the statistics in question. It has to address relationships both inside and outside the organization. This is especially relevant in a changing environment that presents multiple challenges, given the growing use of web pages, significant technological advances that allow presenting and processing large volumes of information, and the increasing availability of public and private information that until a few years ago had very limited access (for example, a wide range of administrative records).

To address this, statistics providers must have in place a dissemination policy and strategy that establishes the general practices to be followed in releasing statistical data. These guidelines can be broken down into five broad areas: information access, content, user relations, distribution channels, and training for the team in charge of producing the statistics.

This report presents a summary of the identified best practices in statistical diffusion, considering the different technological solutions and tools for the communication, dissemination, presentation, and use of economic and financial information by central banks or financial supervisors. The objective of diffusion is to promote the use of statistics, to educate users, and to encourage the producers of statistics to orient their work toward end users, taking into account the security of confidential information.

The report starts with a description of the importance of statistics and the challenges of diffusion, followed by the identification of the main challenges in this area. It then describes best practices in diffusion and the standards followed by 33 organizations that produce financial statistics. The final section outlines the main conclusions.

Importance of statistics

Statistics are at the core of economic and financial analysis, so their availability and access is fundamental for a correct assessment of the state of the economy and for sound policy decision-making. As a public good, statistics should, first and foremost, efficiently satisfy the needs of the different users, taking care not to impose an excessive burden on review respondents or other informants. At the same time, statistics should be as complete as

possible, accessible to all citizens, and reported in such a way that the main results are easily understood without requiring specialized knowledge. A new user is assumed to have at least a partial understanding of the wide range of terms used in statistics, the different classifications and compilation methods, and the representativeness of the data, especially in an increasingly complex and dynamic economic context.

In this area, the challenge for central banks and other official agencies that provide statistics is to guide users. Therefore, the definition of the information that will be made available to the public is one of the most critical and important components of the statistical process as a whole.

The institutions that provide official statistics should establish a diffusion policy and strategy that supports the fundamental principles of the statistical process, which can be summarized as follows:

- Relevance: Published statistics must be useful and valuable to users and as complete and detailed as possible, and they must meet all requirements in terms of legislation, confidentiality, quality, and efficient production.
- Quality: Statistics must be precise, reliable, consistent, and comparable over time and space.
- Opportunity: Statistics must be updated and disseminated on time and at a relevant frequency. They should be released according to a previously announced schedule, so that users can know in advance when the information will be available.
- Independence: The content and timeliness of the statistics that are released must be determined by a fully autonomous and technically independent entity.
- Objectivity: The treatment and presentation of the data must be impartial and complete.
- Accessibility: Official statistics must be published in a format that is clear and understandable to all users, who must receive equal treatment. Any privileged access to statistics must be duly reported to the public. Access to statistical data must be general (equal for all users) and free of charge.
- Legality: The agency responsible for compiling and disseminating statistics must have the legal authority to collect information from different agents and publish it under standards that ensure confidentiality.

Dissemination of statistics

For many institutions, the process of compiling statistics ends with uploading the data into a repository for public access. Nevertheless, statistics serve a much broader function that includes an adequate dissemination of the data. That is why it is necessary to have a diffusion policy in place and to implement an ongoing dissemination management strategy.

It is therefore important to address relationships both inside and outside the organization, which is especially critical in a changing environment that presents multiple challenges deriving from the growing use of websites, the significant technological advances that

support processing large volumes of information, and the increasing availability of public and private information. The due protection of confidential information is also an ongoing challenge.

A community that trusts the statistics will be more willing to collaborate on reporting information and allocating the necessary resources for an adequate production of data.

Users and target audience

To satisfy the various demands for statistical products, it is important to determine who needs the information and what information they need.

With regard to the former, statistical information needs to be addressed a wide audience, with different degrees of knowledge and diverse preferences for or dislike of specific technological tools. Thus, one challenge is to provide inclusive access that is also focused and timely. The major stakeholders or statistical data users can be segmented into four groups:

- Financial market participants and observers;
- Researchers (academics and students);
- The media, who play a key role in diffusing information; and
- The general public.

With regard to the latter—the content needed by users—the agency must satisfy a dynamic demand from a heterogeneous public, as described above. It is essential to be flexible and to remain alert to the needs of users, because agents change and what they need changes and evolves over time, in terms of content, degree of disaggregation, depth of the analysis, and the presentation format (manipulable data and microdata).

An important aspect of diffusion is that when a new statistic is announced, the agency must create realistic expectations by communicating the objectives that are intended to be achieved. The institution must be aware that for the public, each new statistic published takes on an official character simply by having been complied and released by the agency in question.

Best Practices

Institutions that provide statistics must have in place a diffusion policy and strategy that establishes the general practices to be followed in releasing statistical data. These guidelines can be summarized under the following five areas.

(a) Access to information

The production agency makes available to the public all the statistics it compiles, using a diffusion mechanism that is quickly and easily accessible. The delivery of information should

be free of charge and simultaneous for all interested parties and the general public, and any privileged access should be duly communicated.

Access depends on how the information is provided, categorized, and classified. It is important to provide new information in a way that highlights its recentness, ordering data by date of publication.

It is also highly advisable to put all statistical information in a single place, that is, the aggregate data together with its breakdown, related statistics, the associated methodology, an analysis report, and other relevant information.

(b) Content: Statistical information, methodology, and analysis

When statistics are released, the data should be published in conjunction with the associated methodology and the technical analysis of the results. These elements complement and significantly enrich the use and understanding of the published information.

The methodology comprises the description of the set of techniques, processes, assumptions, and data sources used in the compilation, so that users can understand both the phenomenon represented in the statistics and its scope and limitations. Since the methodology used is essentially based on standards issued by competent international organizations in the field, it is necessary to publish any methodological changes in the treatment of the data, through the timely publication of a note or document outlining the explanation for the change. Another recommendation is to publish the data description (metadata), detailing the source, frequency, and other characteristics of the variable.

The main findings or trends should be published in an analysis report or press release, to provide information for contextualizing the behavior of the variables. The communication should be concise, clear, and simple, focusing on just a few messages or issues and not overburdening the reader with too many numbers in the text. The report can be complemented with tables and figures to reinforce the key points.

Currently, users are increasingly requesting time series and disaggregated data (microdata), in order to verify the current, intertemporal, and cross-sectional consistency of the data. The production agencies must meet this requirement, taking precautions to safeguard the privacy, integrity, and confidentiality of both the data and the informants.

(c) Relationships with users

Statistics providers must get to know their data users in order to learn their needs and determine how to meet them. There is a wide range of technological tools and programs for community outreach and collaboration, which should be incorporated so that users can communicate their concerns regarding the data, methodologies, and/or the published analysis, as well as receive information on new developments in the field of statistics.

These tools range from the more traditional, such as an email account or telephone number that the public can use to raise concerns and ask questions addressed by a group of

specialists, to newer mechanisms such as the use of social networks (Facebook, Twitter, YouTube, and Instagram).

Another recommendation is to research and analyze the needs of data users and to monitor the use of existing information and the kinds of decisions it supports. This can be achieved through periodic reviews on the degree of users' satisfaction and their concerns; meetings of specialized committees to identify, analyze, and evaluate new information requirements or presentation format; tracking of how the media reports on new developments in statistics; and the use of software to measure the number of website visits and/or information downloads (Google Analytics, Piwik, etc.).

Another critical aspect of relationships with users is the timely and accurate revision and publication of statistics, which should be released according to a predetermined schedule that identifies the exact date on which the information will be delivered. Finally, it is important to have a data revision policy so that users will know when and why the data will change.

(d) Distribution channels

With regard to the channels or mechanisms of diffusion, how the information is presented and accessed is crucial for facilitating the understanding and use of the statistics.

The different dissemination channels can be grouped into tradition channels, nontraditional channels, and complementary resources. The first group includes the usual data diffusion methods, such as press releases, statistical bulletins, and user-ready data files in PDF, CSV, Excel, and other formats. Nontraditional channels include more modern information visualization techniques. These comprise multi-functional institutional databases that allow cross-checking data, series previews, the specification of date ranges and frequencies, and downloading in different formats; database applications for smartphones and tablets; interactive graphics, which show the movement of the variables; infographics, understood as a combination of images and text that provide an attractive illustration of the key messages; and services for data vendors, such as Webservice, to facilitate massive data downloading and promote the use of the data among market analysts or a more specialized audience.

Complementary resources include formats that reinforce the above mechanisms, such as videos explaining the key concepts and results, as well as talks or seminars for journalists, analysts, trade organizations, and economic students, to inform them about the compilation methodology and data sources of the main statistics compiled.

Over and above the advantages offered by the latest technology, caution should be used in introducing new processes to the full range of users, whose preferences can range from an insistence on continuing with the conventional tools to an undaunted and unconditional support of technological advances. This implies that statistics providers often have to maintain the traditional dissemination channels while complementing them with new statistical products and visualization techniques, together with instructions for use.

(e) Team training

This area has to do with the guidance and instructions given to the team of professionals in charge of the elaboration and dissemination of statistics, in terms of how to orient their work in order to satisfy users. All the staff responsible for compilation should be involved in the dissemination process, even when they do not have direct contact with users.

It is critical to train the institution's personnel through ongoing participation in seminars and classes that review standards and methodologies and improve data quality and dissemination practices for the statistics in their area. Examples include training in the use of new graphic tools, how to create presentations, and how to write reports.

Finally, the team should be given reports on the tracking of the use of their statistics and any assessments and suggestions received for the products under their responsibility.

Observable practices

Under the framework of Group 4 of the Financial Information Forum (FIF), a study of observable dissemination practices was carried out based on a review of the websites of 33 entities that publish financial statistics. The institutions under assessment included the central banks of G20 countries[1] and FIF participants,[2] as well as the bank supervisors that make up the Association of Supervisors of Banks of the Americas (ASBA) (Appendix 1). The analysis covered 30 characteristics related to dissemination and was applied to the English version of the web pages of the European Central Bank (ECB) and the central banks of France, Germany, India, Indonesia, Italy, Japan, Russia, Saudi Arabia, South Korea, and Turkey. In the case of the U.S. Federal Reserve System, the individual websites of the regional Federal Reserve Banks were reviewed, such as New York or St. Louis. The goal was to identify, based on an international comparison, the most common practices in statistics dissemination (Appendix 2).

While the vast majority of the countries implement good dissemination practices, it is not always easy to find all the available materials.

The topics covered by the review were information access, content, user relations, and distribution channels.
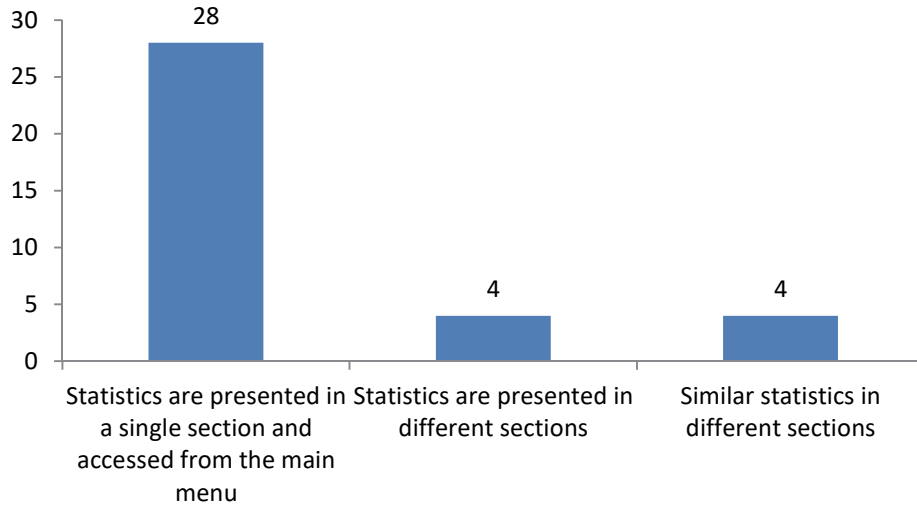
(a) Access to information

The analysis shows that the majority of the institutions evaluated (28) have a single section for statistics, with direct access from the website's home page. Four of the institutions break up the information across various sections, and four have multiple access points, although three of these have a single statistics section (figure 1).

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[1] For the purposes of the analysis, the ECB was considered part of the G20. China was excluded from the sample, because the English-language webpage has significant lags in data availability.
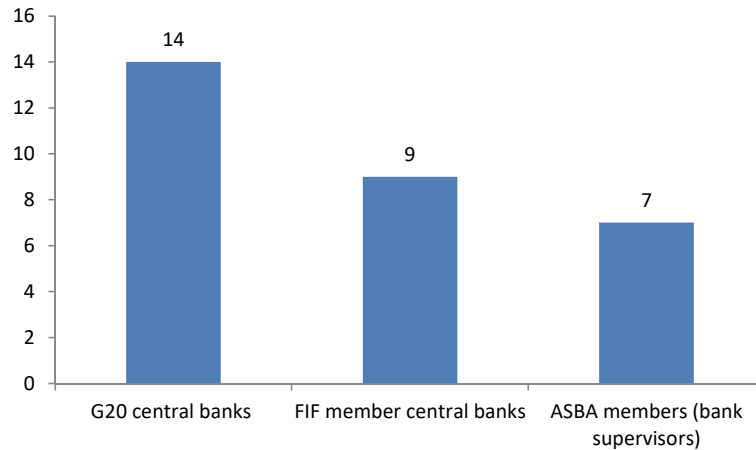[2] Argentina, Brazil, and Mexico are members of the G20 and the FIF.

Figure 1
Statistics access

Source: Prepared based on the review.

By country bloc, 14 of the G20 members, the ASBA associates and almost all the FIF members have a website section devoted solely to statistics (figure 2).

Figure 2
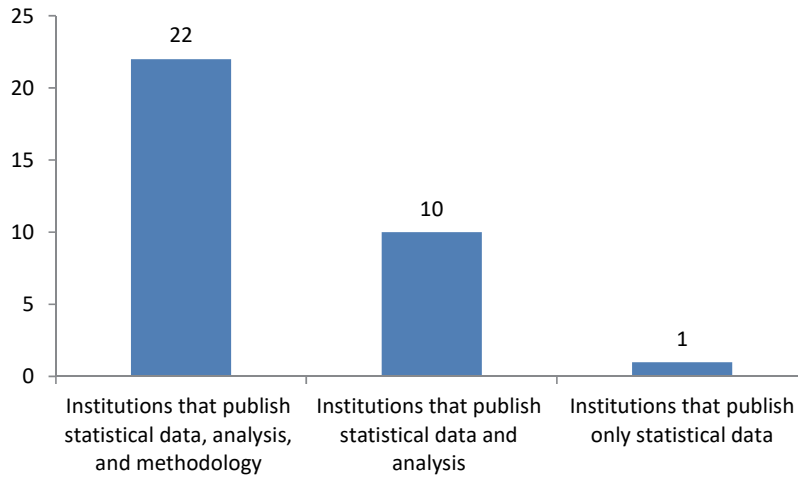*Single access to statistics by type of institution*

Source: Prepared based on the review.

(b) Content: Statistical information, methodology, and analysis

With regard to content, 22 institutions complement the publication of data with technical reports and information on the methodologies used. Of the remainder, 10 institutions publish the data and some sort of analysis, which could be anything from a brief press release to an extensive results report. Finally, only one institution provides just the data (figure 3).
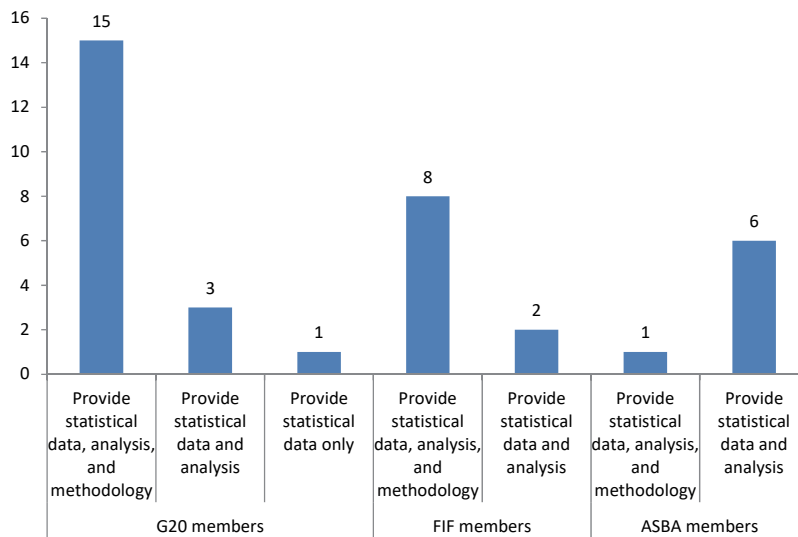
Figure 3
Content

By type of institution, 15 of the G20 banks publish the data and complementary information, three provide some type of analysis, and one reports only the data. Of the ten FIF countries, eight provide the data, the associated methodology, and a report. In contrast, only one of the ASBA members publishes methodologies, but they all provide analysis reports (figure 4).
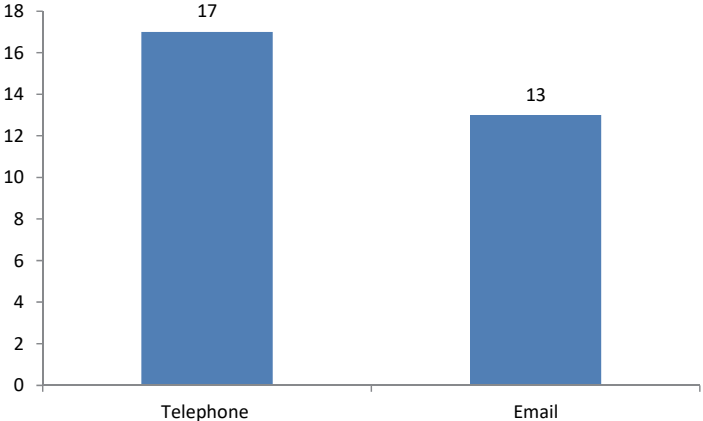
Figure 4
Content by type of institution

Finally, the different institutions perform varying levels of analysis. Whereas some only issue brief press releases, others develop more specific reports that are several pages long or they use newer instruments for delivering information, as described above in the section on distribution channels.

(c) User relations

With regard to user relations, 51% of the corporations have dedicated email accounts or telephone lines for receiving queries related to statistics (figure 5).
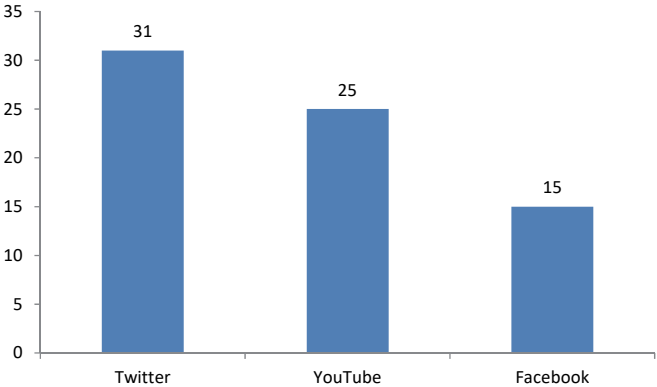
Figure 5
Means of contact

All of the institutions use social networks or have implemented community outreach programs, university lectures, or presentations for the general public. There is a strong preference for being active on Twitter (31 institutions), followed by YouTube (25) and Facebook (15) (figure 6). However, the use of these platforms is mostly confined to a strategy of establishing a web-presence through the announcement of new publications or activities, rather than taking full advantage of an instrument for communicating statistical information or analysis. Other outlets are also used, albeit to a lesser extent, including Flickr, LinkedIn, Google+, Periscope.tv, and RSS feeds.

Figure 6
Social network presence

As indicated, another way to establish effective relationships with users is to implement community outreach programs, which are closely related to the institutions' educational

work. Examples include student essay competitions and school lectures. These projects have been carried out by at least 17 of the organizations, seven of which are G20 members.

Another good way to keep in contact with users is to provide information on publication dates and the schedule for the revision of statistical products. In the sample, 22 institutions publish their calendars, of which 17 are G20 members and eight are FIF participants (figure 7).

Figure 7
Institutions that release publication schedules of statistics, by type of organization
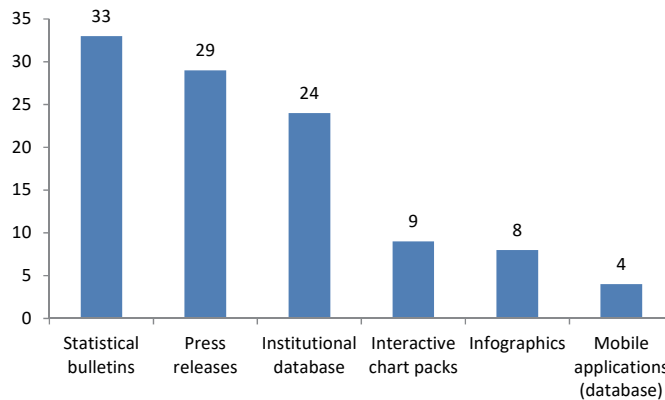

Source: Prepared based on the review.

Finally, a practice that is used by eleven organizations is to establish an announcement system for new statistical releases, via subscription to an email.

(d) Distribution channels

The review reveals that while the institutions employ a wide range of dissemination channels, the majority include the use of press releases (29) and statistical bulletins (33) (figure 8). With regard to other channels, 15 of the organizations apply some of the less traditional tools, such as interactive graphics, database applications designed especially for smartphones or tablets, or some type of infographics (figure 8).

Figure 8
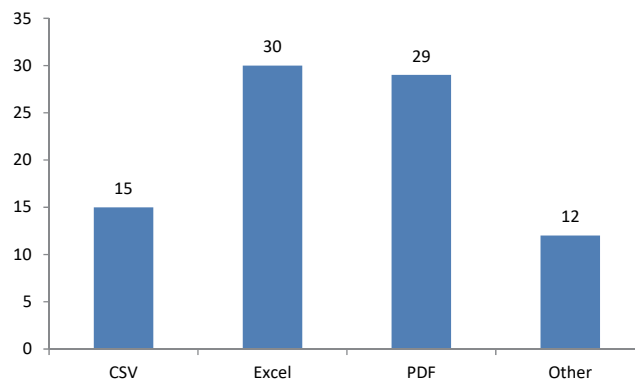*Reviewed institutions by type of dissemination channel*

Source: Prepared based on the review.

Fully 24 organizations have an institutional database; that is, they have some type of repository that provides an organized system for storing and manipulating data. However, there is a wide disparity in repository features. Some systems, for example, do not support cross-checking data, series previews, downloading in different formats, the specification of date ranges and frequency, or customized searches. The institutions with the most complete systems include the Central Bank of Chile and the Federal Reserve Bank of St. Louis.

With regard to download formats, 30 of the institutions use Excel, 29 use PDF, and 15 use CSV. Other formats are available in 12 of the organizations, including HTML, IQY, SDMX, and TXT (Figure 9).

Figure 9
Data download formats

Source: Prepared based on the review.

(e) Overall assessment

In sum, the institutions can be ranked from 1 to 100% based on the characteristics analyzed, where 100% means that the institution has 27 of the reviewed attributes. (For data access, centralized access is the desirable characteristic, so the other three

access alternatives are not included.) The institutions with the highest ranking are the Italy, Mexico, Peru, United Kingdom, and the United States, albeit with different combinations of products and functionality (table 1).

Table 1
Top 10 observable characteristics

Ranking	Country	Score
1	United States	81%
2	Peru	81%
3	Italy	78%
4	Mexico	78%
5	United Kingdom	78%
6	ECB	70%
7	Chile	70%
8	Republic of Korea	67%
9	Canada	63%
10	Indonesia	63%

Source: Prepared based on the review.

Conclusions

Statistics are paramount for economic analysis and sound policy decision-making. Consequently, the availability of timely and reliable statistics is essential for the understanding of economic phenomena. The production of statistics does not end when data are released to the general public. Rather, the dissemination process is much more complex.

Statistics production agencies face rapidly changing environments and a diverse group of users who require new statistics or statistical products and who use new technological tools. To be successful in disseminating their products, these agencies must recognize the heterogeneity among their data users and be flexible and creative in adapting to their needs, following a series of good practices.

A review of observable practices on 33 institutional websites (namely, central banks in G20 and FIF countries and bank supervisors in the ASBA) demonstrates that all the institutions provide data access, albeit with some subtle differences. Thus, a large number of the institutions have a website section dedicated exclusively to statistics. In general, the majority aim for a comprehensive delivery of their statistics, in terms of disaggregation, methodology, reports, etc. Moreover, a large share of these organizations have a centralized repository or database for disseminating data quickly and efficiently. They also make an effort to communicate with users through mechanisms such emails and social networks, with a high use of Twitter. The most developed systems use a battery of instruments to deliver a full service to their users.

The study reveals that there are still gaps that need to be closed in order for these institutions to improve their data dissemination. For example, the use of social networks has been spreading rapidly, so this is an interesting channel to continue exploring. Another unsatisfied

demand is access to microdata or more granular data, especially when the information is recorded by name. The institution must be very careful with regard to this issue, because of its responsibility to protect confidential information.

It is crucial for production agencies to make a strong effort to get to know data users and their demands, whether through large-scale reviews or by interviewing groups of specialists, such as focus groups, in order to verify the ideas contained in this report.

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Appendix 1: Websites reviewed

Central Banks	ASBA Members
Deutsche Bundesbank	Bank of Brazil
Saudi Arabian Monetary Agency	Superintendency of Banks and Financial Institutions (Chile)
Central Bank of Argentina	Financial Superintendency of Colombia
Reserve Bank of Australia	Superintendency of the Financial System (El Salvador)
European Central Bank (ECB)	
Central Bank of Bolivia	
Central Bank of Brazil	National Banking and Securities Commission (Mexico)
Bank of Canada	
Central Bank of Chile	Superintendency of Banks of Panama
Bank of the Republic (Colombia)	Superintendency of Banks, Insurance and PFAs (Peru)
Bank of Korea	
Central Reserve Bank of El Salvador	
U.S. Federal Reserve Bank	
Bank of France	
Reserve Bank of India	
Bank Indonesia	
Bank of Italy	
Bank of Japan	
Bank of Mexico	
Central Reserve Bank of Peru	
Bank of England	
Central Bank of the Dominican Republic	
Central Bank of the Russian Federation	
South African Reserve Bank	
Central Bank of Trinidad and Tobago	
Central Bank of the Republic of Turkey	

Appendix 2: Observable characteristics on the websites of production agencies

Categories	Items/Countries	Country 1	Country 2
Statistical information on website	Statistical information is all in a single section and is accessed from the main menu Statistical information is in a subsection other than statistics Statistical information is found in several different sections Similar information is found in different sections		
Data diffusion formats	Press releases Printed or PDF bulletin Interactive chart packs Mobile applications Infographics Methodologies Institutional database Analysis reports Videos explaining statistical concepts Videos explaining statistical results Community outreach program Other		
Data presentation and download formats	PDF CSV Excel spreadsheet Institutional database Other		
Contact with the statistics area	Email Telephone		
Use of social networks	Facebook Twitter YouTube Instagram Other		
Timeliness	Published schedules Email announcements to users		