



FINANCIAL INFORMATION FORUM OF LATIN AMERICAN AND CARIBBEAN CENTRAL BANKS

Identifying a Minimum Set of Standard Financial Information

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***Final Report of Financial Information Forum Working
Group 1 (FIF-WG1)***

November, 2017

This document was prepared under the Financial Information Forum (FIF) of the Center for Latin American Monetary Studies (CEMLA). The working group is constituted by of the Banco de Central de la República de Argentina, the Banco Central de Bolivia, the Banco de México and the CEMLA Technical Secretariat.

Introduction

At the first meeting of the Financial Information Forum (FIF), held in Mexico City on June 2015, it was agreed to set up 5 separate working groups to develop different financial information topics. **The specific objective of Working Group 1 (FIF-WG1) is to: “Identify minimum sets of standard financial information according to their “level of complexity”, which can be used to monitor, among other aspects, monetary conditions, price stability and financial stability in the economy”. Defining a benchmark of “basic” financial information central banks use to fulfill their functions can also serve to identify gaps in the data employed for monitoring the financial system.**

The FIF-WG1 consisted of members from the central banks of Suriname, Bolivia and Mexico, and benefitted from the participation of representatives from institutions on the FIF Advisory Committee, including the International Monetary Fund (IMF), Bank for International Settlements (BIS), European Central Bank (ECB), Banco de Portugal (BdP) and the Banco de España (BdE).

Methodology

To meet the objectives of the FIF-WG1, an inventory of the data collected by Latin American and Caribbean central banks in 2015 was used. A survey was designed and implemented in order to identify the data resources used for different central banking functions that multilateral organizations and central banks on the Advisory Committee.¹ The survey considered the characteristics and uses of required information to fulfill central bank functions.²

The Survey has two sections. The first, comprised the list the functions and sub-functions of central banks and multilateral organizations. The second, is a matrix listing the different information requirements, considering the main data themes classified in 3 large groups (see Diagrams 1 and 2): i) Markets; ii) Institutional Sectors and; iii) Payment Systems.

Besides data thematic groups, the Survey also included: i) levels of complexity and commitment of each data resource reported to multilateral organizations; ii) general features of data such as: granularity, timeliness, frequency, aggregation level and methodologies, and; iii) the elements necessary for identifying the uses given to each data resource according to central bank functions and sub-functions. It is important to point out that the survey's design also took into account the intention to compare the data collected with the Survey against the inventory of data collected in 2015 among Latin American and Caribbean central banks.

The inventory of data resources requested from central banks of the region in 2015 identified the theme and general characteristics of the data. However, central bank functions and sub-

¹ The survey answered by FIF Advisory Committee members is referred to as “Survey” throughout this document.

² With regards to Central Bank functions see: Ortiz (2009). BIS, Issues in the Governance of central banks - A report from the Central Bank Governance Group, Guillermo Ortiz - Governor of the Bank of Mexico, May 2009.

functions were not included for identifying the uses of the information. Figures 1 and 2 show the differences between the features covered by the Survey and the characteristics included from the data inventory requested from central banks of the region.

Figure 1
Survey Structure for the Advisory Committee Members

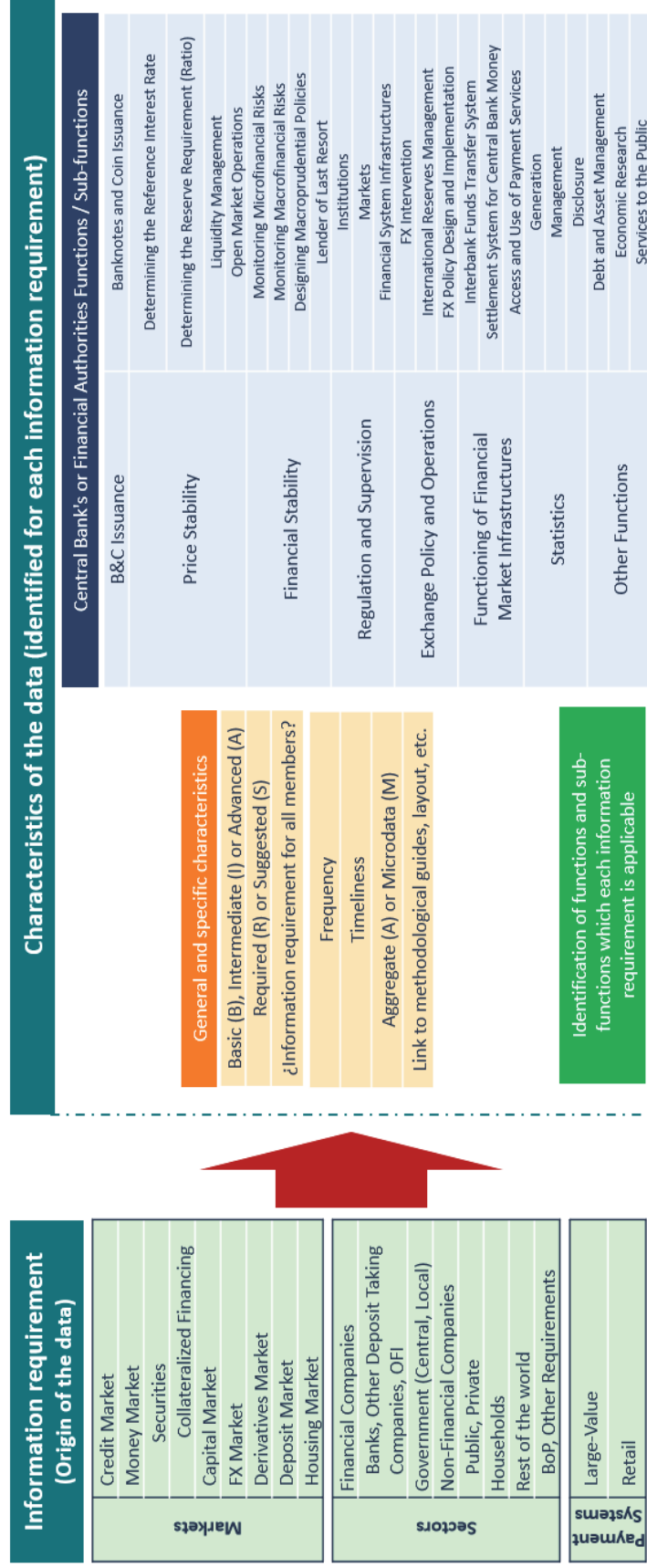
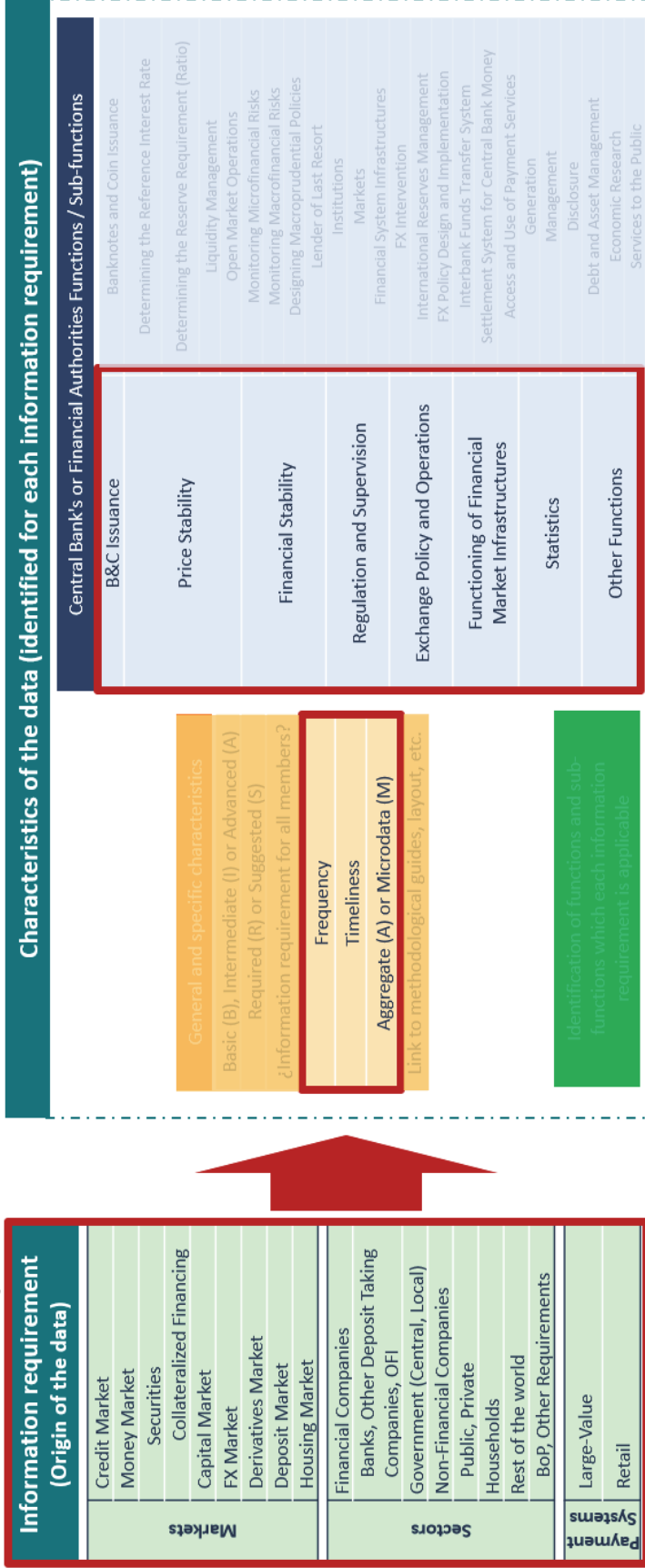


Figure 2
Inventory Structure of Information Resources of the Latin American and Caribbean central banks



Main Results

The Survey was answered by two international organizations (IMF and BIS), the ECB, and two national central banks (BdP and BdE). Meanwhile, the inventory of Latin American and Caribbean central banks includes information from fourteen central banks: Argentina, Bolivia, Brazil, Chile, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Paraguay, Peru, Dominican Republic, Suriname and Trinidad and Tobago.

Quantitative analysis of the answers demonstrates that each data resource is generally multipurpose i.e. in most cases the same resource is used to fulfill more than three different central bank functions or sub-functions (see Table 1 and Table 2

Table 1
Required data by purpose frequency: Advisory Committee

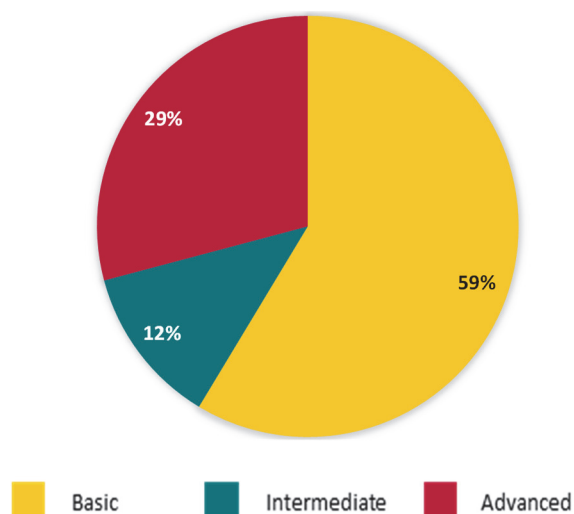
	1 use	2 uses	3 uses	+3 uses	Total
ECB	0	0	0	34	34
IMF	0	0	1	14	15
BIS	8	2	0	0	10
Banco de Portugal	1	8	15	28	52
Banco de España	1	17	20	9	47
Total	10	27	36	85	158

Table 2
Required data by purpose frequency: central banks

	1 use	2 uses	3 uses	+3 uses	Total
Argentina	8	2	1	5	16
Bolivia	2	10	9	5	26
Brazil	0	0	1	526	527
Chile	4	14	10	6	34
Ecuador	1	5	1	4	11
Guatemala	3	4	2	4	13
Honduras	1	7	2	0	10
Mexico	85	52	77	113	327
Paraguay	11	6	0	0	17
Peru	0	12	8	20	40
Dominican Republic	6	20	4	0	30
Salvador	9	5	0	0	14
Suriname	0	0	1	6	7
Trinidad and Tobago	0	1	7	13	21
Total	130	138	123	702	1093

With respect to the results on the level of complexity of data requirements by multilateral and regional organizations (IMF, BIS and ECB), it can be seen how over half of them correspond, according to the classifications given by each organization, to basic requirements and almost a third are considered as advanced (Graph 1). Nonetheless, it should be pointed out that there are differences among the organizations surveyed. For instance, although the answers of the IMF show most of its requirements are highly complex, this is not so in the case of the ECB, an organization which considers as basic the level of complexity of most of its requirements.

Graph 1
Survey for the Advisory Committee: Complexity of the data requirements^{1/}



1/ Includes only information requirements from the IMF, BIS and ECB

According to the answers, the uses of information required by multilateral and regional organizations varies depending on the type of institution. Graphs 2 and 3 shows that data are mainly used for generating statistics, regardless of whether they are a Central Bank or International Financial Organization or if the information refers to the market or institutional sectors. Meanwhile, for central banks of the region data resources are mostly used for analyzing financial stability (21 % of resources with market information and 32% of resources with institutional sector data). It is worth pointing out that financial stability analysis is also an important use among the institutions on the Advisory Committee.

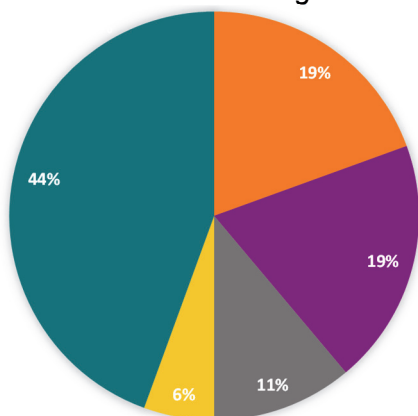
It is also worth mentioning that, according to the answers, in the case of central banks of the region, although generating statistics is not the first use of required information, data coming from institutional sectors is frequently used for such purposes. In fact, it was revealed that 31% of those requirements are used for generating statistics.

As might be expected, one important use of information requirements for institutions on the Advisory Committee as well as for the region's central banks is the analysis of price stability, a function for which market data is more useful for the members of the Advisory Committee

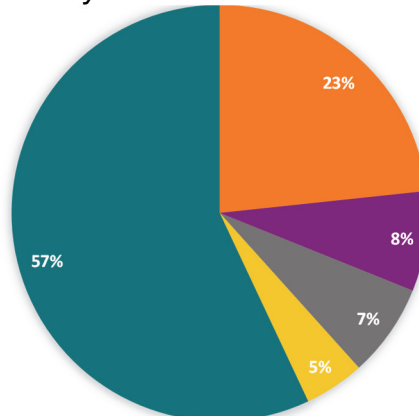
(International Financial Organizations 19% and central banks 23%, of their respective information requirements) than for the region's central banks (18% of their information resources).

Graph 2
Markets Data

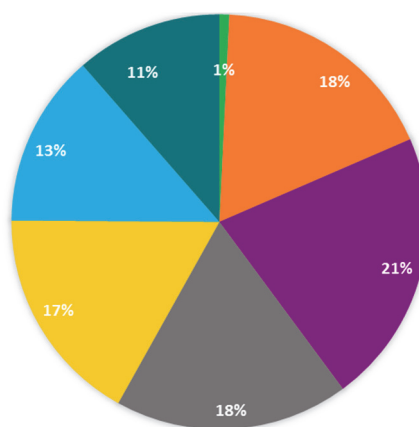
International Financial Organizations ^{1/}



Advisory Committee central banks ^{2/}



LAC central banks

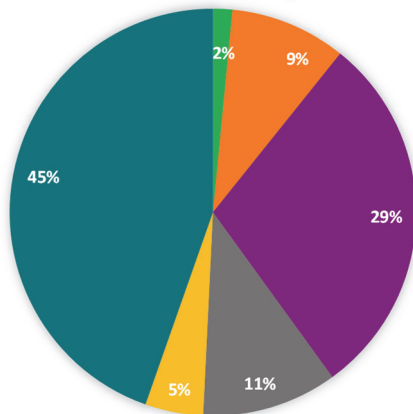


1/ BIS and IMF information are included.

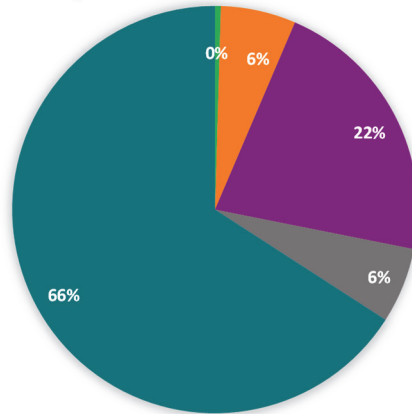
2/ BdP, BdE and ECB information are included.

Graph 3
Institutional Sectors Data

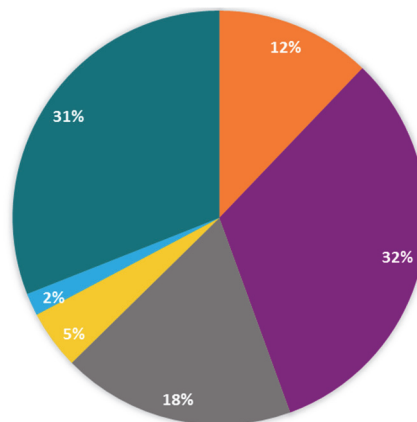
International Financial Organizations ^{1/}



Advisory Committee central banks ^{2/}



LAC central banks



1/ BIS and IMF information are included.

2/ BdP, BdE and ECB information are included.

To establish a benchmark of information requested by international organizations (IMF, BIS and ECB) that can serve as guidance for developing the financial system information function of the region's central banks, the different data requirements were classified according to their level of complexity and enforceability, while also considering their granularity and frequency. Figures 3, 4 and 5 describe the results.

International Monetary Fund (IMF)

The answers of the IMF to the Survey illustrate how this organization periodically requests different information from its member countries, mainly to foster worldwide monetary cooperation and ensure financial stability, among other objectives.

The answers show how required information is generally at the aggregate level (no micro-data), mostly on a monthly and quarterly basis. In addition, the IMF identifies that its requirements mainly have an intermediate and advanced level of complexity. The answers show that the IMF defined required information crucial for fulfilling its main mandates as “required” and that which supports its functions as “suggested”.

Figure 3
International Monetary Fund Information Requirements

	Basic	Intermediate	Advanced		
Required	Collateralized Financing by Monetary authorities. Reserves Data Template (RDT)		Exchange rate: end of period and period average		
	Financial derivatives of the Monetary authorities. Reserves Data Template (RDT)		Central bank survey		
			Other depository corporations survey		
			Reserves Data Template (RDT)		
			Balance of payments		
			International Investment Position Statistics		
			External Debt Statistics (In coordination with the WB)		
Suggested		Lending interest rates for different types of instruments	Coordinated Portfolio Investment Survey		
		Deposit interest rates for different types of instruments	Coordinated Direct Investment Survey		
		Other financial corporations survey			
		Revenue and expense by function, instrument, and counterpart			
	Daily	Monthly	Quarterly	Biannual	Annual

Bank for International Settlements (BIS)

The BIS requests information from its sixty-member central banks and monetary authorities to fulfill activities mainly related to monetary, economic and banking matters.³ All the information requested from its members is “required”, leaving no requirements to the discretion of the reporting institutions. Although most of the required information is aggregate, it also considers micro-data requirements (deposit-taking corporations’ balance sheets and insurance company statistics). The inputs mainly have a quarterly and annual frequency and are used to generate international financial statistics. It is worth mentioning that several information resources created by the BIS constitute international benchmarks for financial markets given their detail and depth.

Figure 4
Bank for International Settlements Information Requirements

	Basic	Intermediate	Advanced
Required	Property Price Statistics: nominal residential property prices for 58 countries PS statistics and information: The CPMI publishes reference works on payment, clearing and settlement systems	Repos Statistics: Securities financing transactions (SFTs), by country Debt Securities Statistics: debt securities issuance of the residents in the domestic and in all markets General macroeconomic and financial statistics	FX statistics: turnover in foreign exchange markets Derivatives Statistics: Triennial Survey Shadow banking information: selected breakdowns of the financial corporations’ sector Balance sheet Insurance company statistics: company level information for QIS regulatory exercises
Suggested			

■ Daily
■ Monthly
■ Quarterly
■ Biannual
■ Annual

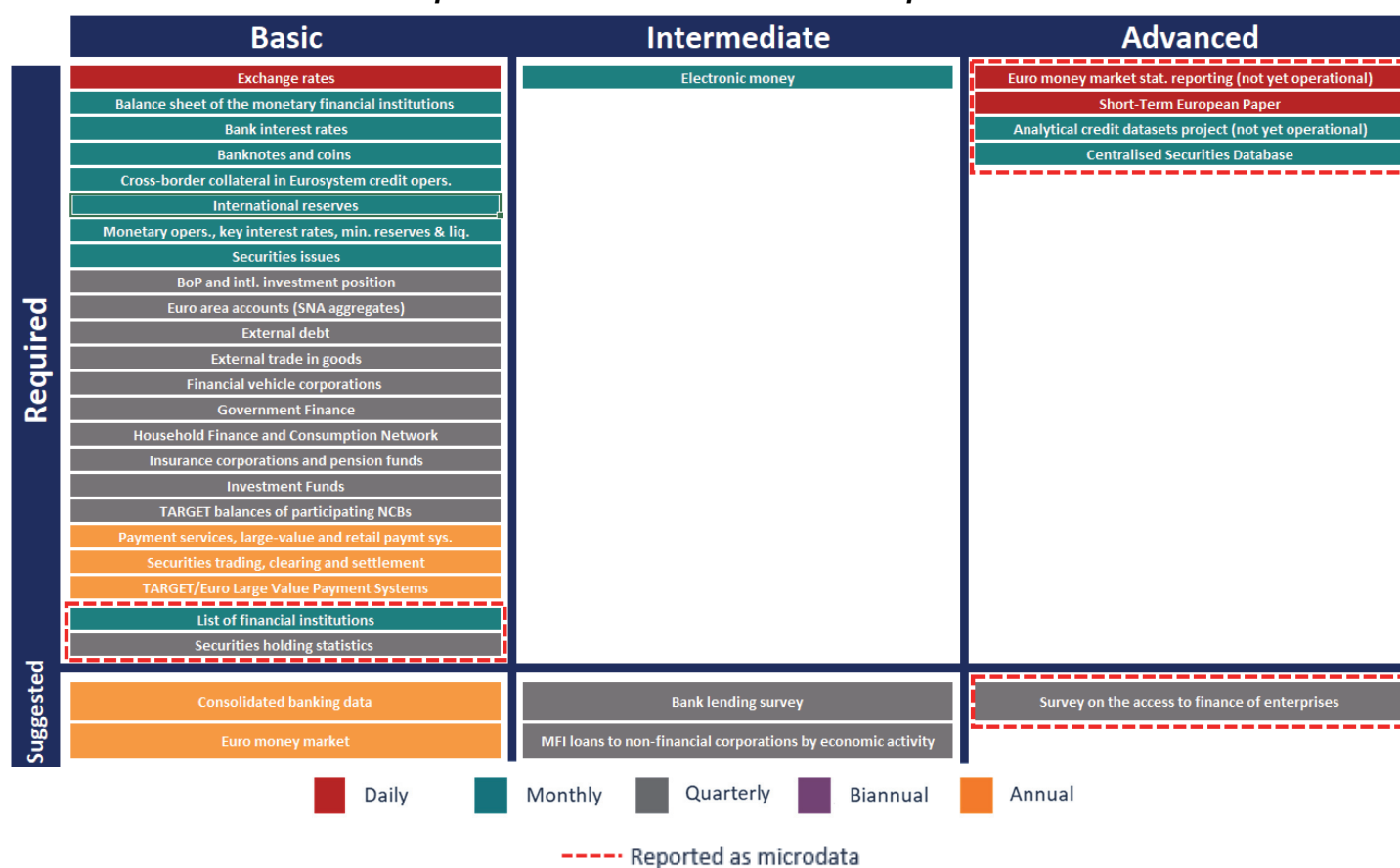
----- Reported as microdata

³ The BIS offers a range of financial services to assist central banks in the management of their foreign exchange and gold reserves, as well in the investment of their own funds. In terms of information, the BIS collects, analyzes and disseminates statistical data on the international financial system for central bank policy research and analysis purposes.

European Central Bank (ECB)

The central banks of European Union member states are obliged to report to the ECB different information for the fulfillment of their duties.⁴ Given the wide range of information needs, the ECB classifies most of its information requirements as “required” and with “monthly” and “quarterly” frequency. Unlike other international organizations, the ECB requests micro-data, which it mostly classified as “advanced” level information. Nevertheless, it is noteworthy that the majority of all its information requirements are classified as “basic” level. It also stands out that all the requirements reported as “advanced” correspond to micro-data, probably due to the potential difficulties involved in obtaining such information.

Figure 5
European Central Bank Information Requirements



⁴ The general mandates of the ECB are: define and implement the monetary policy of the Eurozone; perform foreign exchange operations; hold and manage the official currency reserves of Eurozone member states (portfolio management); promote the smooth functioning of payment systems, and carry out specific tasks related to the prudential supervision of credit institution.

Other Experiences: Financial Information Models of the Banco de Portugal (BdP) and the Banco de España (BdE)

The information requirements that make up the information model of the Banco de Portugal exemplifies the data elements and characteristics of a model with a high integration of micro-data and aggregate information. The BdP is one of the central banks surveyed with a great volume of transactional and granular data. The latter is a result of the significant changes made over the last 15 years to improve processes for generating and disseminating statistics. In this regard, the implementation of several information requirements designed to cover different central bank needs and thereby reduce outstandingly the cost of reporting for such institutions. Furthermore, to facilitate the exploitation and dissemination of these data the requirements includes Business Intelligence solutions which provides tools for analyzing the use of information.

The information obtained from the Survey of the Banco de Portugal was used to construct Figure 6, which measures some characteristics of that institution's information model. Although aggregate information requirements appear to predominate in the model, such requirements are highly detailed, which enhances data analysis and use options. It is important to point out that due to its scope, the transactional data required on money market operations, securities, securities portfolios and credit represents a "highly valuable asset" for the information model of the BdP, due to its richness for the analysis and generation of new data. It should be mentioned that financial intermediaries are the main source of aggregate as well as transactional data.

Figure 7 shows the model of information of the Banco de España constructed using information from the Survey. Although aggregate data predominates in this information model because of the number of requirements registered, it also has a significant proportion of granular data that can allows the generation of more detailed statistics.

In the case of the information model of the Banco de España, its information requirements were classified considering as criteria the use and functions given to the information by that central bank. It can therefore be seen that a large proportion of the requirements are associated directly or indirectly to the activities of monitoring and analyzing financial stability, which is an aspect that could help maintain and strengthen clearly prudential features in order to prevent financial system risks.

Figure 6. Banco de Portugal – Financial Information Model (inputs)

	Transactional (or very detailed information)	Aggregated (Granularity according to the type of information)	
Daily	Prices of traded bonds and shares	Foreign exchange market turnover	Euro exchange rates against other currencies
	Interbank money market transactions	Eligible assets to be used as collateral in monetary policy operations	Individual bank loans used as collateral in monetary policy operations
	Banks (and other depository institutions): detailed information of interest rates of credits to non-financial institutions	Balance sheets of banks (and other depository institutions) detailed by country, currency, term and institutional sector	Banks (and other depository institutions): additional breakdown of instruments for public and non-resident sectors
	Banks (and other depository institutions): detailed information of securitization transactions	Banks (and other depository institutions): additional detailed information of instruments	Banks (and other depository institutions): geographical distribution of credits
Monthly	Economic and financial transactions with non-resident sectors	Banks (and other depository institutions): additional information of securitization by country	Banks (and other depository institutions): geographical distribution of deposits
	Financial settlements with non-resident sectors	Banks (and other depository institutions): additional breakdown of instruments for public and non-resident sectors	Banks (and other depository institutions): interest rates of new operations
	Securities portfolio (banks and other financial intermediaries)	Securities issuance	Credit from financial intermediates breakdown by term and kind of financial product
		Transactions in the gross settlement systems	Number of participants and Transactions in the clearing systems
Quarterly	Banks (and other depository institutions): detailed information of securitization transactions	Cross-border transactions through Target2-PT	SEPA direct debits - transaction amounts and credit and debit authorizations
	Survey of non-financial corporations	Financial assets of the central government	Financial assets of the Social Security
		Regional and local government debt	
		Balance sheets of banks (and other depository institutions) detailed by country, currency, term and institutional sector	Banks (and other depository institutions): additional breakdown of instruments for public and non-resident sectors
Annually	Balance sheet of non-financial corporations	Banks (and other depository institutions): additional detailed information of instruments	Banks (and other depository institutions): geographical distribution of credits
	Profit and loss accounts of non-financial corporations	Banks (and other depository institutions): additional information of securitization by country	Banks (and other depository institutions): geographical distribution of deposits
		Banks (and other depository institutions): additional breakdown of instruments for public and non-resident sectors	Banks (and other depository institutions): information of financial asset detailed by country according to different approaches of risk
		Transactions by type of payment instrument	Number of ATM and POS terminals in Portugal
Triennial		Payment cards in Portugal - number of cards issued and amount of transactions	Number of institutions offering payment services
		Derivatives (FX market and other derivatives)	Household survey

Information coming from

FINANCIAL SECTOR

NON-FINANCIAL SECTORS

GOVERNMENT

PAYMENT SYSTEM

Figure 7. Banco de España – Financial Information Model (inputs)

Conclusions

The aim of the FIF-WG1 was provide elements for identifying a minimum set of standard financial information used to fulfill Central Bank functions. To this end, the FIF Advisory Committee was asked to answer a survey and the information inventory collected by Latin American and Caribbean central banks was analyzed.

The analysis of the information denotes that most data requirements are used to fulfill more than one central bank function. The Survey also shows that the generation of statistics, analysis of financial stability and price stability are the main uses given to the required financial information. Qualitative analysis of the information shows that the big share of information required by the multilateral organizations of the Advisory Committee corresponds to aggregate data, which is to be expected given their core functions. Moreover, according to the diagram of the Banco de Portugal information model, it has a high proportion of aggregate information with a certain level of detail, although not granular, that could be useful for analysis.

In addition, reviewing the information provided by central banks of the region among the characteristics of required information on markets (securities, foreign exchange, derivatives, among others), was denoted that such data mostly has a daily frequency, which could increase the opportunities for analytical purposes, and therefore support the different central bank mandates.

Different types of asymmetries were also identified among the information requirements of central banks of the region with regards to frequency, timeliness, detail, among others. This represents an opportunity to share experiences for possible improvements. It is important to mention that on this matter in particular, Advisory Committee member central banks have been very willing to support and exchange experiences in accordance with the needs emerging during the next steps of the FIF.

Thus, the work of the FIF-WG1 will hopefully serve as a guidance to improve and broaden the information models of the region's central banks in light of existing practices and data requirements from multilateral and regional organizations.