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Sex-disaggregated Supply-side Data Relevant to Financial Inclusion

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Abstract[*]

At the global level, efforts to measure and monitor financial inclusion indicators have been increasing. However, there is still a substantial lack of sex-disaggregated data, particularly from the supply side; that is, data compiled from information provided by financial institutions. Among the countries of Latin America and the Caribbean (LAC), there is a systematic lack of sex-disaggregated data at both the public and private sector levels. This impacts negatively on efforts to improve financial inclusion, as it hampers the design of strategies with actions and objectives that are more appropriate for men and women and makes it impossible to evaluate public intervention or measure progress. This paper seeks to help close the supply-side data gap and proposes a set of sex-disaggregated supply-side data indicators, based on both international data-gathering initiatives and those undertaken at the national level in LAC. It suggests that financial regulators in LAC should collect supply-side data gradually to build a database that is harmonized and comparable among the region's countries. Such data would facilitate the study, monitoring, and comparison of progress on financial inclusion for men and women. It would also facilitate the design of appropriate policies and reforms.

JEL Classifications: G14, G18, G21, G28, J16
Keywords: data collection, financial inclusion, financial regulation, gender, supply data

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Contents

1. Introduction

Financial inclusion (FI) refers to extending people's access to, and effective use of, a range of quality financial services, such as saving, credit, payments, transfers, and insurance policies, at a reasonable cost. Presently, FI is widely recognized as a key public policy goal. More and better FI helps reduce poverty by reducing people's vulnerability; it boosts productivity for micro, small, and medium-sized enterprises (MSMEs) and encourages business formalization. At the macro level, greater access to financial services has positive effects on growth, on financial stability, and on reducing inequality (GPFI, 2011; GPFI, 2015a).

Comprehensive data availability is crucial for enabling different actors to make optimal decisions, as well as for tracking progress in terms of FI. The lack of data has been recognized as a significant barrier to extending FI, especially to low-income households and small enterprises. At both the global and the national levels, efforts to improve collection, monitoring, and analysis of financial inclusion data have intensified. The frameworks for data collection can be classified as "supply-side," with information obtained from financial service providers and from regulators, and "demand-side," in which users of financial services provide the data.

Despite growing efforts to measure and monitor FI-related indicators, sex-disaggregated data and particularly of supply-side data remains are rarely collected. This hampers the expansion of FI, given the evidence that women and men have different attitudes about finances (GBA, Data 2X and MIF-IDB, 2015; GBA, 2014; Global Findex, 2014; Pailhé, 2014; SBIF, 2015; SFC, BdO and Ipsos, 2014). The available demand data reveal a persistent gender gap in access to and use of financial services, which must be understood before it can be effectively tackled. The absence of comprehensive sex-disaggregated data stands in the way of defining appropriate FI strategies with actions and objectives that are differentiated for men and women; it makes gender-disaggregated evaluation difficult and hampers both the evaluation of public interventions and the measurement of progress.

In the LAC region, there is a notable absence of FI data in general, and of sex-disaggregated indicators in particular, at both the public- and the private-sector levels. Only a few countries generate FI supply-side data, and the majority of those that do so do not systematically disaggregate data by gender. Chile is the exception. International agencies gather most of the sex-disaggregated information from LAC countries through consumer financial services surveys.

In LAC, the available demand data indicate that a major gender gap persists. In particular, the data from Global Findex, the most comprehensive global demand database[1] reveals that, in 2014, there were still gaps between men and women in the majority of LAC countries in terms of deposit account ownership, savings, total loans, and business loans.[2] The gap in the number of accounts

[1] According to Demirguc-Kunt et al. (2015), Global Findex offers more than 100 indicators from 143 economies. The indicators are built using data from surveys taken by interviewing more than 150,000 adults aged 15 and over, selected at random. As these are survey data, whether the responses are genuine or influenced by other factors, for example, of a reputational nature, cannot be corroborated. This is a characteristic limitation of demand-side data.
[2] See the data in Annex 1.

in the entire LAC region is 5.5 percent, and tends to be greater in Central America and the Andean region, but is inverted—in women's favor—in Argentina, Belize, Mexico, and the Dominican Republic. Between 2011 and 2014, there was a marked reduction in the gap in the number of accounts in LAC (3.8 percentage points), although the figures diverge widely among the countries in this group. With respect to saving, the gap between men and women is 3.2 percent globally and 3.6 percent on average in LAC, in line with the global proportion. The majority of countries show positive gaps of between 12 percent (Costa Rica) and 0.5 percent (Panama). Only in Belize and Haiti does the percentage of women who describe themselves as savers surpass that of men. The level of formal saving by women in LAC is around 11 percent, a lower figure than the global average of 26 percent, or that of the high-income countries of the Organisation for Economic Co-operation and Development (OECD), where the index rises to 50.4 percent (Demirguc-Kunt et al., 2015). With respect to loans,[3] most LAC countries reveal gaps in favor of men, with a few exceptions in which the gaps are inverted, as in Belize, Ecuador, Haiti, and Peru. For business loans, there are also noticeable gaps in favor of men, although these are not found in the Dominican Republic, El Salvador, or Peru.[4]

At the micro level, most financial institutions in the LAC region also fail to analyze their sex-disaggregated data. According to a survey by FELABAN and MIF (2014), most banks do not collect sex-disaggregated data about their credit portfolio, and when that information is collected, only a few use the data to inform management's decision making.[5] An additional effort is therefore required so that financial institutions become aware of the significance of the problem and start collecting that information (GBA, 2015).

In this context, this study proposes a series of sex-disaggregated supply-side indicators that the financial regulators should compile, monitor, and analyze to guide the policies and programs aimed at improving FI and developing the financial sector. The recommendations will have a regional scope with a view to clearing the way to building a harmonized database with comparable data between LAC countries.

The paper is organized as follows: Section 2 sets out the arguments that justify disaggregating supply-side data according to sex. Section 3 summarizes the best practices in terms of collecting and publishing sex-disaggregated FI data. Section 4 studies the initiatives in some LAC countries regarding gathering and publishing FI data in general and sex-disaggregated data in particular. Section 5 proposes a set of relevant supply-side data indicators that LAC countries should gather and disseminate, as well as their selection criteria and the challenges associated with implementation. Section 6 concludes.

[3] Percentage of survey participants age 15 and over who reported having taken out a loan (either individually or with a partner), for any purpose and from any source during the last 12 months, at a bank or other financial institution.
[4] See the country data in Annex 1.
[5] Of the bank officials interviewed, 39 percent stated that they use this data for decision making.

2. The Importance of Financial Inclusion Data

Information plays a crucial role for FI. On the one hand, it helps to understand the state of FI at any given moment and, consequently, facilitates the design of policies needed to improve FI and evaluate progress over time. On the other, financial institutions can use the data to better understand the opportunities offered by the market. Regulators and other policymakers can use the data to understand trends in the business climate, identify risks, and draft evidence-based policies, as well as to identify shortcomings and establish priorities among the specific actions to be taken.[6]

a. Demand-side and Supply-side Data

The FI literature distinguishes between sources of information as "demand-side data" and "supply-side data."[7] Demand-side data are those compiled from information obtained from financial service users, whether individuals, households, or enterprises. In general, this compilation is carried out through surveys or discussion groups, including qualitative research (Ardic, Chen, and Latortue, 2012). These data offer information about the way in which services are accessed, how they are used, which clients receive them, and the depth of the service. Demand-side surveys are often expensive, require time to develop and analyze the information, and are not always comparable year-on-year. For these reasons, they are not regularly carried out.

Financial service providers, such as banks, microfinance institutions, and finance cooperatives, provide supply-side data. The regulatory agency, which usually enjoys more organized and standardized access to information from financial service providers, at least those under its auspices, compiles these data at the national level. It is often not possible to obtain data from informal financial service providers given that, as they are unregulated, there is no single institution with the authority to demand data from them. This might be a drawback, because unregulated institutions often provide a significant proportion of financial services, especially to sectors of the population excluded from the formal financial system. The main advantage of supply-side data is that, once established, the variable cost of collection declines when data are collected regularly, as both financial institutions and the regulator learn from the process and the investment in data capture and analysis systems is recovered. Moreover, these data can be established in such a way that they are collected regularly and are comparable among countries.

Supply-side data and demand-side data are complementary and can measure different aspects that help to understand FI. Supply-side data are based on completed transactions. Therefore, the offer information that can illustrate the access, use, quality, or other characteristics of the transactions made, of the credit and savings products used, or of any other operation that has actually occurred. Demand-side data provide important information about the way in which services are used and about the clients that receive them (even through informal channels), as well as about those who demand financial products but are unable to access them. Efforts must be made to complement both sources of data to adequately reflect the characteristics of financial

[6] Ardic, Chen, and Latortue (2012) offer an exhaustive analysis of the importance of solid data for FI policymaking.
[7] For a wider discussion, see GBA, Data 2X, FOMIN-IDB (2015).

service access, use, and quality, particularly for underserved groups. The use of standardized definitions and measurement methodologies helps to make comparisons over time and between countries.

b. The Importance of Including Disaggregation by Sex in the Data

The incorporation of the gender dimension into the economic development debate has acquired growing significance. There is clear and abundant evidence with respect to the role of gender equality as a factor that supports economic development, and its bearing on public policymaking (World Bank, 2012; IDB, 2014 GBA, Data 2X and MIF-IDB, 2015). Greater gender equality[8] has positive consequences for countries' productivity—due to better access for women to education, to economic opportunities and productive inputs—and for development results. Although economic development has helped close gender gaps, there is evidence that it is not sufficient to reduce all gender disparities; therefore, public policy interventions may be necessary (World Bank, 2013).

In 2014, the MIF-IDB, the Global Banking Alliance for Women (GBA), and Data 2X joined together to map the current state of sex-disaggregated data in the financial sector at the global and the national levels. The main objective of that initiative was to better understand the nature and the scope of the data gender gaps and to share lessons learned about data collection, value, and use. This highlights the interest and the importance that international and multilateral agencies and other key actors currently place on the gender dimension in the FI debate.[9] The available evidence—basically from demand-side data or from case studies—indicates that gender difference is a relevant factor in explaining access to and usage of financial services.[10] There are gender gaps in bank account ownership and in the use of financial savings and credit products. The evidence also shows that the existence of legal discrimination or cultural norms that are biased against women explains part of the variation observable among countries with respect to women's access to finance (Demirguc-Kunt, IDB, 2014; Klapper and Singer, 2013; Pailhé, 2014). Other nonfinancial barriers include conditions in the business climate that affect women differently than men (e.g., the legal and regulatory environment or the quality of the existing infrastructure), the personal characteristics of business owners (e.g., differences in education or management training), limitations within financial institutions (e.g., scant familiarity with women clients and/or cultural barriers that hamper targeting products to this segment), and a financial infrastructure that limits incentives to reach more women clients or to do so appropriately (e.g., lack of access points close to the home or inappropriate design of credit bureaus and guarantee registers) (GPFI, 2011; IDB, 2014; Pailhé, 2014).

For all these reasons, the role of the financial regulator is crucial in narrowing the FI gender gap. Progress has been made with regard to gathering and using sex-disaggregated data from the

[8] According to the IDB gender policy, gender equality is understood to be the condition according to which women and men enjoy the same conditions and opportunities for the exercise of their rights and to fulfill their potential in social, economic, political, and cultural terms. See IDB (2010a), Paragraph 4.2 and the corresponding footnote.
[9] An exhaustive compilation of these initiatives is found in GBA, Data 2X and MIF-IDB (2015, p. 4).
[10] The most copious and extensive information is provided by the Global Findex 2014 database. See Demirguc-Kunt et al., 2015; and the introduction and Annex 1, with data on LAC countries.

demand side, but supply-side data are still extremely scarce, and those gathered regularly and on comparable bases are scarcer. These types of data are essential to help policymakers understand women's financial needs and behavior and thereby support the design of evidence-based policies that extend FI for women.

Furthermore, sex-disaggregated supply-side data are an important source for financial institutions to design products that more efficiently address women, given that sex disaggregation enables them to detect new business opportunities. Other studies by GBA (2014 and 2015) reveal that the market for banking services for women is expanding and offers attractive growth opportunities for banks. However, there is a lack of awareness among bankers of the key aspects of successfully serving this segment, such as that women tend to be more risk-averse than men, favoring saving over investment, and are often more loyal to an institution that offers them the services they demand; they prioritize services over products; they are less likely to be in arrears than men; and they achieve a higher deposit-to-income ratio. Banks already have many sex-disaggregated data, but appropriate techniques are needed to take advantage of them and to develop appropriate women-centered business models.

c. Why are sex-disaggregated supply data so scarce?

The study by GBA, Data 2X, and MIF-IDB investigates the reasons behind the notable dearth of sex-disaggregated supply data (GBA, Data 2X, and MIF-IDB, 2015). It is crucial to understand these reasons, as the proposals made should help to correct these problems. First, they suggest a lack of awareness among regulators and financial institutions of the importance of data disaggregation by sex. To a large extent, this is because research papers stressing the importance of this disaggregation in terms of FI and financial stability are scarce. Awareness is currently growing among the international community, however, of the importance of sex-disaggregated data for enhancing the impact of women-oriented programs.

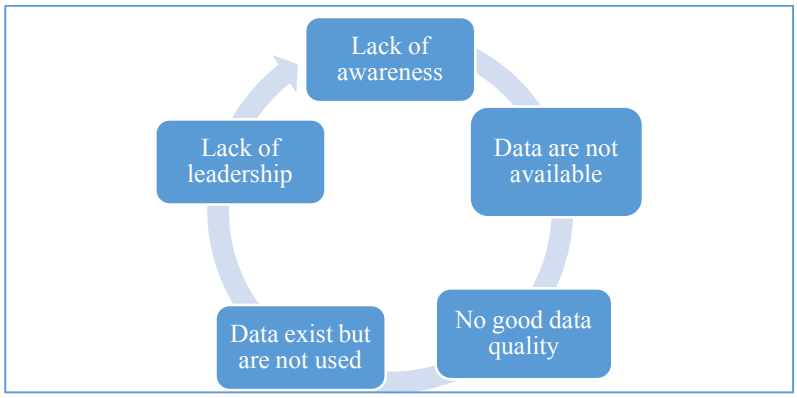
Second, the financial institutions' systems and processes are not necessarily set up to capture and disaggregate information in the required form, in either their consumer or commercial portfolios. The report by GBA, Data 2X, and MIF-IDB (2015) shows that although financial institutions could adapt their systems to disaggregate new clients by sex, data compilation for existing clients can be a slow and expensive process. In this regard, one significant aspect on which financial institutions fail to agree is the definition of a "women's business," which impacts strongly when collecting standardized and precise information.[11]

Third, the report points to certain data quality problems that hamper data compilation. For example, some sex-disaggregated data are available but are not based on standardized definitions.[12] Sometimes the products are not identified consistently, as staff have not been properly trained to understand the importance of compiling good-quality information in this area. Women-owned businesses present the greatest challenges: banks fail to establish coherent

[11] In Section 5.b, definitions of "women's businesses," "woman-led businesses," and "woman-owned businesses" are analyzed.
[12] As in the aforementioned case of women's businesses.

definitions to identify business ownership by women; many women small business owners are recorded in banks' consumer portfolios, given the difficulty for banks of determining the purpose of the loan.[13] Moreover, since changes in shareholding or management can affect the business classification of "woman-owned," banks argue that regularly checking and updating such information can be expensive and time consuming.

Figure 1
Reasons Behind the Scarcity of Sex-disaggregated Data



Source: Author's elaboration, based on GBA et al. (2015).

A fourth aspect is the use of data. The study highlights that although some regulators and banks have data that could be disaggregated by sex, these data are underused. To make this kind of disaggregation, statistical capacities must be in place to organize the information, process it, and publish it. They must compile, integrate, and collate data from multiple sources to ensure consistency. Moreover, the data generated by different public agencies might not be connected to the policymakers' objectives.

Finally, all the abovementioned reasons are subordinate to one main cause, which is the need for effective leadership at both the global and the national level with regard to the importance of sex-disaggregated supply-side data. This is crucial if initiatives are to advance on solid and comparable bases. Until public policymakers and financial regulators clearly establish the strategic reasons why, from the point of view of FI, it is important to compile sex-disaggregated data and that such data are standardized, initiatives will be limited to those launched voluntarily by individual financial institutions or promoted by international agencies.

[13] This is a typical characteristic of SME financing, not just of financing for women-owned SMEs.

3. Review of Global Data Initiatives

a. Sources of Supply-side and Demand-side Information and its Segregation by Sex

Various studies identify initiatives in the area of FI-related data gathering at the global level.[14] Table 1 shows the data bases of supply-side and demand-side data most relevant to FI, paying special attention to those that have a wide scope with regard to countries and dimensions.

Table 1
List of Multinational FI-related Data-gathering Initiatives

SUPPLY	DEMAND
IMF- Financial Access Survey (FAS)	*Global Findex*
IMF- International Financial Statistics	
IMF- Financial Soundness Indicators	Opinion surveys
WB – Global Payment System Survey	
BIS – Payment system	WB- Living Standards Measurement Study
WB–Financial Services survey	WB- Enterprise surveys
WB – Remittance Prices Worldwide	ECB- Household Finance and Consumption Survey
ECB-Monetary Financial Institutions database	
ECB- Bank lending survey	ECB- A2F of SMEs
Bankscope database	MECOVI
WOCCU	FinScope
MIX*	OECD – Survey of Adult Financial Literacy
Microcredit Summit Campaign*	WB- Consumer Protection and Financial Literacy Surveys
	WB- Migration and remittances
	Financial registers

Source: Ardic, Chen and Latortue (2012).
*Includes some sex-disaggregated indicators. See Annex 2.
Note: IMF = International Monetary Fund; WB = World Bank; BIS = Bank for International Settlements; ECB = European Central Bank; WOCCU = World Council of Credit Unions; MIX = Microfinance Information Exchange; MECOVI = Improving the Survey and Measurement of Living Conditions; OECD = Organization for Economic Cooperation and Development.

When the sources of supply-side data highlighted in this paper were analyzed to establish which of them disaggregate at least some variables by gender, hardly any of them were found to include this dimension. The most comprehensive databases with respect to the number of participating countries and the variables analyzed fail to reflect this aspect. This is true of the IMF's Financial Access Survey (FAS), the World Bank's Financial Services Survey, and the WB or BIS payment system databases, to mention a few. The initiatives that do include some sex-disaggregated variables are MIX and the Microcredit Summit Campaign. MIX provides information on microfinance institutions (MFIs), some regulated and others not, which offer services chiefly to low-income segments of the market. The variables that report by sex are: personnel and credit officers at MFIs, number of active borrowers, number of outstanding loans, gross loan portfolios, number of members of the boards of directors and the number of managers. For its part, the

[14] See, for example, Ardic, Chen and Latortue (2012), and GBA, Data 2X and FOMIN-IDB (2015).

Microcredit Summit Campaign also includes data on MFIs, and reveals the number of active clients according to their level of poverty and their gender. Annex 2 describes in more detail the bases of supply-side data, their characteristics, and availability and whether the information is disaggregated by sex.

b. *Global Partnership for Financial Inclusion (GPFI). G-20*

For the G-20,[15] FI is key in the fight against poverty and for achieving inclusive economic development. Reliable data on FI are fundamental for designing informed policies and monitoring the effect of the initiatives, as well as serving as a starting point from which to establish the aims of FI (GPFI, 2011). The G-20 leaders agreed (Cannes Summit, 2011) to support worldwide and national-level efforts to promote FI, including data gathering. For this purpose, they published the Basic Set of Financial Inclusion Indicators (Table 2) (GPFI, 2012).

Table 2
The G20 Basic Set of FI Indicators

Categories	Indicators	Existing source	Dimension
1. Formally banked adults	Percentage of adults with an account at a formal financial institution	Global Findex	Usage
	Number of depositors per 1,000 adults OR number of deposit accounts per 1,000 adults	IMF FAS	Usage
2. Adults with credit from regulated institutions	Percentage of adults with at least one outstanding loan from a regulated financial institution	Global Findex	Usage
	Number of borrowers per 1,000 adults OR number of outstanding loans per 1,000 adults	IMF FAS	Usage
3. Formally banked enterprises	Percentage of SMEs with an account at a formal financial institution	WB Enterprise Surveys	Usage
	Number of SMEs with deposit accounts/number of deposit accounts OR number of SME depositors/number of depositors	IMF FAS	Usage
4. Enterprises with outstanding loan or line of credit from regulated institutions	Percentage of SMEs with an outstanding loan or line of credit	WB Enterprise Surveys	Usage
	Number of SMEs with outstanding loans/number of outstanding loans OR number of outstanding loans to SMEs/number of outstanding loans	IMF FAS	Usage

[15] The G-20 was set up in 1999 and is made up of Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, the United Kingdom, the United States, and the European Union. Following the global financial crisis of 2008, the G-20 became the chief forum of international economic cooperation, with a leadership role in the reform of world economic governance. www.g20.org.

5. Points of service	Number of branches per 100,000 adults	IMF FAS	Access

Source: GPFI (2012).

The G-20 has set forth three key dimensions for measuring FI: access, usage, and quality of financial services. The Basic Set comprises five categories of data on access and use. Each country must gather and monitor its own data, even when the G-20 propose alternative sources of supply-side and demand-side data, which can be used when the country lacks its own data-gathering mechanisms (shown in Table 2). The indicators, selected from global databases, satisfy criteria of quality, robustness, sustainability, and continuity. The basic indicators are not sex-disaggregated.

The GPFI subsequently developed a broader set of FI indicators: the G-20 Financial Inclusion Indicators, which measure not just access and usage, but also the quality of financial service provision.[16] These contain 24 categories of data and 29 indicators. The objective is to consider these indicators in combination with specific information from each country to inform policymakers and conduct exhaustive follow-up of the evolution of FI. The indicators draw on both supply-side and demand-side data. The G-20 encourages countries to compile their own data to complement these indicators in areas of importance to each country. With a view to calculating the indicators, the GPFI provides references to global data sources as a useful starting point from which to complete the information.[17] The criteria that determined selection were data availability, sustainability, and robustness, as well as their appropriateness and comprehensiveness. None of the indicators is disaggregated by sex.

c. Alliance for Financial Inclusion (AFI)

AFI developed the Core Set of FI Indicators[18] as a tool to help record the state of FI in member countries. The Core Set represents a first step for policymakers seeking to expand FI, because their indicators measure the fundamental aspects of FI and help develop appropriate policies and closely monitor progress over time. AFI went to great lengths to harmonize these indicators with existing international measurement initiatives, but also intends them to be flexible enough to allow countries to use their own definitions in certain aspects.[19]

The Core Set includes the two basic dimensions of FI: access to and use of financial services (Table 3). AFI recognizes that the quality dimension is also important but understands that this is a much more complex matter when it comes to conceptualization and measurement, which is why it is not included within the Core Set.[20] The choice of indicators is based on six principles: usefulness and relevance to public policy formulation; pragmatism, which means that data can be collected in a reasonable period and by making use of existing data; consistency, with access to financial services surveys and the data gathering projects of international and multilateral agencies; flexibility, so that the countries can adapt certain definitions or use substitution variables; balance, between the access to and use of financial services data and the use of supply

[16] GPFI (2013). The leaders approved the indicators at the summit meeting in Saint Petersburg, Russia, in 2013.
[17] The sources of data include: Global Findex, the IMF's FAS, Gallup World Poll, World Bank Financial Capability Surveys, OECD National Financial Literacy and Inclusion Surveys, OECD SME Scoreboard, and World Bank Global Payments Systems Survey.
[18] AFI (2013). Elaborated by the Financial Inclusion Data Working Group (FIDWG).
[19] For example, by defining "administrative unit" or "adult population" in accordance with the national definitions. AFI estimates that although this makes comparability between countries less than perfect, it helps to spread a sense of belonging among the countries that use it (AFI, 2013).
[20] Similar to the approach adopted by the G-20 for its Basic Set of FI Indicators.

and demand data; and aspiration, that is, that countries should aspire to gather the indicators exactly as defined.[21]

Table 3
Core Set of FI Indicators. AFI

Access
Number of access points per 10,000 adults at the national level, segmented by type and by administrative unit*
Percentage of administrative units with at least one access point
Percentage of total population living in administrative units with at least one access point
Usage
Percentage of adults with at least one type of regulated deposit account
Percentage of adults with at least one type of regulated credit account
If these data are unavailable, the following can be used:
Number of regulated deposit accounts per 10,000 adults
Number of regulated credit accounts per 10,000 adults

* AFI (2013) considers "administrative units" as the units into which a country divides its territory.

In a second phase, the AFI seeks to create broader measurement tools and encourages its members to develop second-level indicators that include the quality dimension of FI. Efforts will also be centered on developing more sophisticated data analysis tools to improve harmonization and deepen comprehension of the data.

Likewise, the AFI developed a "SME FI Indicators Base Set" (AFI, 2015b) to provide a reasonably integrated view of the state of SME FI in each country. This Base Set is intended to be used in conjunction with the Core Set of FI and thereby offer an overall assessment of the state of FI. The Base Set is based on the principles of completeness, usefulness and relevance, consistency, flexibility, and aspiration. The indicators include three key dimensions of FI: access, usage, and quality of financial products and services. Annex 3 shows all the indicators suggested by AFI.

In terms of access, the first three indicators are the same as those of the Core Set, since they are equally relevant to SME financing. A fourth indicator refers to electronic access to financial services, whereas the fifth indicator refers specifically to access to credit. With regard to usage, the indicators focus on SMEs with deposit accounts and whether they use credit facilities. The quality indicators include the use of guarantees and risk premiums applied to SMEs. Two additional indicators relevant to this research are also included: the proportion of women's SMEs with deposit accounts and the proportion with loans.[22] One quality indicator from the SME credit portfolio (the level of arrears) is also included.

d. Supply Data: the IMF Financial Access Survey

The IMF FAS is the most important global source of supply-side data on FI. The data are obtained from annual surveys to financial regulators. The database contains 152 time series that result in 47 indicators, grouped according to geographical outreach (a measure of access) and financial services usage. The 2015 Edition achieved a response rate of 92 percent, with 174 jurisdictions

[21] However, for the sake of flexibility and pragmatism, when the above is impossible, certain modifications are accepted and substitute variables are provided (AFI, 2013).
[22] AFI suggests that each country should adopt the definition of women's SMEs that most accords with its own reality.

reporting information (Table 4). One of this survey's limitations is that it is voluntary, which means it has been difficult to achieve full adherence by all countries in successive years.

Table 4
Summary of the FAS Indicators

Variable	Reference
Geographical outreach Number of commercial bank branches, credit unions and financial cooperatives (CUFCs) branches and Microfinance institutions (MFIs) branches; automatic teller machines (ATMs); registered and active agent outlets	Per 1,000 km^2 and per 100,000 adults
Usage- Number of account holders Depositors and borrowers (total, households, and SME) at commercial banks, CUFCs and MFIs	Per 1,000 adults
Usage- Number of accounts Deposit accounts and loans (total, households, and SME) with commercial banks, CUFCs and MFIs	Per 1,000 adults
Usage- Volume of accounts Value of deposits and loans (total, households, and SME) with commercial banks, CUFCs and MFIs Outstanding balances on active mobile money accounts Value of mobile money transactions during the reference year	As a percentage of GDP

Source: Author's elaboration based on IMF (2015). See more details in Annex 4.

The variables are shown for commercial banks, CUFCs, and deposit-taking MFIs. The indicators enable analysis of the geographical outreach (in terms of coverage of both territory and population) of access channels such as branches, automatic teller machines (ATMs) and agents. With regard to usage, they measure the number of account holders and the number of deposit accounts and loans (per 1,000 adults), as well as volume, via the amount of deposits and loans as a percentage of GDP. Two variables on mobile money are also included. The FAS does not include sex-disaggregated data.

This survey represents a well-consolidated source of data. Since the data are collected regularly from supervisory institutions and central bank surveys, these institutions have data, with a degree of standardization of its sources, even when they do not collect other, more integrated FI data at the national level. This is a good argument for encouraging local regulators to gather and analyze this information over time and consistently.

4. Sample of LAC Countries that Compile FI Supply-side Data

Comprehensive FI data collection is incipient in LAC, since few countries systematically gather this information. Scarcer still is FI-related data gathering from the supply side and disaggregated by sex. Only one country—Chile—does so consistently and as part of a wider gender policy. Globally, there are few experiences of countries in which the financial regulator compiles sex-disaggregated data to the same extent as in Chile. The work by GBA et al. (2015) mentions the Solomon Islands, where the regulator gathers sex-disaggregated bank account data to track the progress of its FI aims, which are linked to greater usage of bank accounts by women. In India, the Reserve Bank of India (RBI) published a circular in 2000 (RBI, 2000) instructing state-owned

banks to disaggregate credit according to gender. For these banks, a complementary ruling established initial objectives of 2 percent, rising to the current 5 percent, of the credit portfolio that must be targeted to women. Thereafter, the RBI amended the reporting system to require banks to disaggregate by sex, total loans, interest rate values, whether these are fixed or variable, and the use of non-guaranteed loans. Afterwards, disaggregation by sex of data on deposits was added and, in the case of women, whether these correspond to individual persons or to businesses. The banks must also report on institutional aspects, such as the number of women employed at the bank, the position they occupy, and the total ratio of women to men.[23]

In this section, the case of Chile is the first to be examined, since Chile is the only country in the LAC region that has sex-disaggregated supply-side data and it is one of the most advanced cases in the world. Cases of other LAC countries with comprehensive FI data initiatives are also presented. These countries are relevant because this paper's proposal must be consistent with these existing initiatives, insofar as the data compiled by these countries are consistent with international practices and appropriate for disaggregation by gender. This is in line with the principles of consistency and pragmatism suggested by the AFI for choosing indicators.[24] Moreover, analysis of these countries reveals that data gathering is not an isolated process; rather, it is framed within broader public policy initiatives and, generally, within a national FI strategy.

a. Chile

One recent study commissioned by GBA, Data 2X, ECLAC and MIF-IDB (2016) analyzes the history and the public policy framework that gave rise to the compilation of sex-disaggregated data by Chile's Superintendence of Banks and Financial Institutions *(*Superintendencia de Bancos e Instituciones Financieras, or SBIF). The SBIF initiative is framed within the country's public policy efforts to promote gender equality. These efforts go back to the beginning of the 1990s with the promulgation of the Equal Opportunities Plans (*Planes de Igualdad de Oportunidades*). The first of these plans was drafted in 1994, four years after the creation of the Women's National Service (Servicio Nacional de la Mujer), to "promote equal opportunities between men and women." The second plan, the Equal Opportunities for Men and Women *(Plan de Igualdad de Oportunidades entre Mujeres y Hombres 2000–2010*), covers a longer period and includes a series of objectives, among which are the need to facilitate access to credit for women as one of the specific activities enabling their business development, and the importance of compiling sex-disaggregated information as a means of guiding the strategies. The plan highlights the importance of generating gender-disaggregated data or disaggregating existing data; incorporating comparative gender analysis into policy design and evaluation and into legislative reforms; and producing indicators of gender to enable evaluation and monitoring of policies that favor access to financial services.

[23] For a description of the case of India, see Das Barwa (2015).
[24] See Section 3.c.

Since 2001, the SBIF has incorporated a gender approach into its institutional information system to produce and periodically disclose statistics of access to and use of financial services by men and women. The objective is to satisfy the data requirements associated with designing and implementing public gender equality policies. The SBIF is an institution ascribed to the Treasury, committed to creating information systems that permit disaggregation of sector-based variables by sex and their public disclosure. The SBIF's Report on Gender in the Financial System *(Informe de Género en el Sistema Financiero)* represents the culmination of that process (SBIF, 2015). At present, this Report is published annually. Moreover, the SBIF issues two other publications that are regularly updated: Gender Background Survey (*Encuesta de Antecedentes de Género)* and Gender-disaggregated Banking Products (*Productos Bancarios Segregados por Género).*

The 2014 edition of the Report on Gender in the Financial System (SBIF, 2015) presents an evaluation of the economic dimension of gender equality, referring to the use of financial services alongside the evolution over time of indicators that evaluate the use of savings products, cash management, credit, and financial integrity for both men and women. This report and the data compiled in it are unique in LAC. Table 5 summarizes the variables that include disaggregation by sex.

Among the main conclusions arising from the 2014 report is that the economic dimension is one of the most backward in Chile when compared to world indices, which is probably explained by the low participation of women in the labor market and their lower remuneration. With respect to saving, the variables included enable the SBIF to conclude that there are no noticeable gaps in the coverage of bank savings products. The number of savings accounts held by women is equal to or higher than that of men, even considering the entire period since the Report began publication in 2001 (see SBIF, 2015), although with different behavior given that women are paid less but save more over the long term. Moreover, there is more active demand among women for housing savings products than among men. It is also notable that the majority of housing savings accounts are held by women.

Table 5
SBIF Sex-disaggregated Indicators

Saving	Cash management	Credit	Financial integrity
Term deposits in value and number Fixed-term savings in value and number Housing savings in value and number Retirement savings in value and number	Current accounts in value and number Sight accounts in value and number	Value of the loan portfolio (total, consumer, housing, commercial) Number of borrowers of the loan portfolio (total, consumer, housing, commercial)	Returned cheques (value and number) Loan portfolio delinquency (unpaid amount as percentage of total owed)

Source: SBIF (2015).

The SBIF also highlights other patterns that are differentiated by sex. First, women's bank debt has a higher housing component than that of men. There are gender gaps in access to credit, in

both the number of accounts and the total and average amounts.[25] In relation to financial integrity, women systematically have lower payment arrears and returned check indicators than their male counterparts. This might be explained by the more conservative behavior of both the women and the banks that provide loans to this segment, since women's debt-to-income ratio is noticeably lower than that of men. Chile is the only LAC country that tracks payment arrears and returned checks on a gender-disaggregated basis. These are very important variables when it comes to risk monitoring and decision making by financial institutions.

The SBIF carried out the Gender Background Survey (SBIF, 2012) to learn more about human resources in the financial system from a gender perspective. This survey enabled an analysis of gender gaps in terms of remunerations and participation in the workplace, taking into consideration age, educational attainment, hierarchy, and functional areas. The results indicate that in the workplace, the financial system achieves levels of gender equality greater than those seen in the economy as a whole and that progress had been made since the last evaluation was carried out in 2007. Gender gaps still prevail in three areas: scant participation by women in the highest decision-making positions, salary gaps at the top levels of the hierarchy, and minority female participation in all functional areas other than commercial activity and marketing.

Wih respect to the effective use of the reports, according to new research by GBA, Data 2X, ECLAC, and MIF-IDB (2016), the reports are considered to have helped raise awareness in the financial sector of the importance of addressing women as a differentiated segment. It was mentioned that, for example, in Banco Estado (a state-owned institution), SBIF data have been used as a starting point for developing the business model for its Women Entrepreneurs Program (*Crece Mujer Emprendedora*),[26] which is addressed to women entrepreneurs and provides access to capital, education and networking. Government officials, the media, and business associations also regularly quote the reports whenever aspects of women's economic behavior are analyzed. The Banking Association (Asociación de Bancos) has published research notes on women's banking trends based on the SBIF data, highlighting growth opportunities for the banking sector. Bank consumer satisfaction reports have also been produced that include data broken down according to sex. The SBIF reports have also encouraged the cooperative sector in Chile to begin to disaggregate some of its clients' data by gender.

b. Colombia

In March 2014, Colombia launched its National Financial Inclusion Strategy (Estrategia Nacional de Inclusion Financiera, or ENIF), which sets out a series of objectives and measures to promote greater FI in the country. The Financial Superintendence of Colombia (Superintendencia Financiera de Colombia, or SFC) alongside the Bank of Opportunities (Banca de Oportunidades, or BdO) have published annually since 2011 the FI Report (Reporte de IF, or RIF), which compiles information from various sources of demand-side and supply-side data. The demand-side sources include indicators from Global Findex, which are mainly used to compare the country with others

[25] Sex disaggregation of credit data is only carried out for natural persons, rather than for legal persons (enterprises), except when the business owner takes out microcredit which, according to its value, is then classified as either a consumer or a business loan. See SBIF (2015).
[26] See: https://www.crecemujer.cl/.

from the region. Most of the indicators are disaggregated by sex, given that the original source of information allows this kind of breakdown (SFC and BdO, 2014).

With respect to the supply-side data, the RIF contains an exhaustive range of indicators, built using data from the SFC, from the Superintendence of the Solidarity-based Economy (Superintendencia de Economía Solidaria), microcredit nongovernmental organizations (NGOs), and the banking association. From all these data, there is one indicator with disaggregation by sex: the number of adults with at least one active financial product per type of entity[27] and per gender. The interesting conclusion is that the results of this indicator contrast with diverse demand studies, since there are a higher number of women with active financial products compared with the number of men. This trend is common in the three types of institutions considered, with the most marked differences in favor of women in NGOs and in credit establishments. In around 23 percent of the institutions analyzed, it was not possible to break the figures down according to sex.[28] Table 6 shows the categories of supply-side indicators contained in the RIF that originate from local sources.[29] Annex 5 includes a more exhaustive summary of the indicators belonging to each category.

Table 6

Supply-side data categories included in the RIF	Aspects examined via demand-side survey
I. Adults and enterprises with financial products	I. Demographic and socioeconomic characteristics
II. Financial coverage	II. Financial infrastructure
III. Transactional analysis	III. Financial products
IV. Financial products: savings	IV. Financial behavior
V. Financial products: credit*	V. Use of technology for financial transactions
VI. Remittances	VI. Financial literacy
VII. Financial products: insurance	VII. Financial services quality
VII. Approach to the quality and wellbeing of financial inclusion	VIII. Contribution of financial services to wellbeing

Sources: SFC and BdO (2014) and SFC, BdO, and Ipsos (2015).
*Includes disaggregation by sex.

Furthermore, the SFC, alongside the BdO and Ipsos, developed a demand-side study (SFC, BdO and Ipsos, 2015) to analyze FI in Colombia using information gathered between December 2014 and February 2015. The study addressed two target segments: the general population and the micro-entrepreneurs, and covers aspects of access, use, quality, and contribution to well-being (Table 6). The survey draws some conclusions in gender matters. For example, with respect to access points, it observes that men use automatic teller machines (ATMs) more (81 percent vs. 66 percent women), while women are more likely to go to the branches of financial institutions (24 percent vs. 11 percent men). Moreover, one of every two men has a traditional account, whereas only one in three women has. As far as transactional products are concerned, women use them

[27] Credit establishment, solidarity system, or NGO. See Figure 18 of the RIF in SFC and BdO (2014).
[28] These data use as an identity document the Single Personal Identification Number (Número Único de Identificación Personal, or NUIP), with which it is not possible to make gender distinctions. With this number, information from the Civil Birth Registry (Registro Civil de Nacimiento) can be used as identification throughout the entire life of the individual.
[29] Data already available in Global Findex 2014 have been excluded.

in a lower proportion than men (36 percent vs. 49 percent). However, men feel more dissatisfied (24 percent of them vs. 11 percent of women) and are the more likely to complain about the long lines as a waste of time. Women, by contrast, are more sensitive to costs than men, probably because their incomes are lower, which would help to explain why they are less likely to use transactional products. With respect to savings priorities, men indicate that they save for emergencies or unforeseen events, consumption, and investment in fixed assets, such as housing, business, or vehicles. For women, the priorities are consumption, household costs, and covering emergencies.

c. Peru

The Global Microscope situates Peru as the country with the most favorable environment for microfinance and FI (Global Microscope, 2014). However, only 29 percent of Peruvian adults have an account with a formal financial institution, according to Global Findex 2014. To close this gap, Peru has intensified its commitment and, in July 2015, set in motion the National Financial Inclusion Strategy (*Estrategia Nacional of Inclusión Financiera, or ENIF).*

In this framework, the Superintendence of Bank, Insurance, and Private Pension Fund Administrators (Superintendencia de Banca, Seguros and Administradoras de Fondos de Pensiones, or SBS) publishes its FI Indicators Report containing a series of key aggregate indicators, which show in summarized form, the year-on-year evolution of FI (Table 7). It also provides more detailed supply-side indicators, with information by regions and income quintiles of the population. Annex 6 summarizes the list of information gathered for the financial system. Although none of the indicators are sex-disaggregated, this is still one of the most comprehensive databases in the LAC region.

Table 7
Indicators Included in the SBS FI Reports

FI Indicators	
I. Financial deepening Financial sector loans as a percentage of GDP Financial sector deposits as a percentage of GDP	
II. Scope **a. Access to financial services** Number of offices at the national level Number of ATMs Number of bank correspondent branches Number of service points per 100,000 adult inhabitants Number of service points per 1,000 km^2 **b. Financial service usage** Number of borrowers Number of deposit accounts Number of borrowers per 1,000 adult inhabitants Number of borrowers among the economic active population	**c. Deepening of the scope of financial services** Average loan / GDP per capita Average deposit / GDP per capita Loans to SMEs / Total loans SME borrowers / Total borrowers

Number of credit card holders as percentage of the adult population	

Source: SBS FI Indicators, June 2015.

In 2014, the SBS published the FI Opportunities Map (Mapa de Oportunidades de IF),[30] a tool with information for decision making aimed at broadening the coverage of financial services, identifying business opportunities, and encouraging research on FI from a geographical perspective. The Map can be used to explore, using a graphic interface, more than 150 indicators and variables related to financial, economic, demographic, and infrastructure aspects in the different localities of the country, which reflect the degree of access to and use of financial services, as well as the needs and potentialities for achieving greater FI. The data are not disaggregated by sex.

[30] Available at: http://mapainclusion.sbs.gob.pe/GeoSBS/.

Table 8
Map of FI Opportunities

Data categories
1. Financial deepening / intermediation 2. Basic financial inclusion indicators 3. Access to financial services 4. Use of financial services 5. Opportunities for financial inclusion

Source: SBS.

d. Mexico

Mexico has a National Council for Financial Inclusion (Consejo Nacional de Inclusión Financiera), which is the institution responsible for advice, consultancy and coordination among the country's financial authorities and whose objectives include formulating, implementing, and monitoring the National Financial Inclusion Policy (Política Nacional de Inclusión Financiera).

With regard to supply-side data, the National Banking and Securities Commission (Comisión Nacional Bancaria y de Valores, or CNBV) publishes the National Financial Inclusion Reports (Reportes Nacionales de Inclusión Financiera). The data from these reports are based on the supply-side statistics compiled by the CNBV: the Financial Inclusion Databases (Bases de datos de Inclusión Financiera). These databases contain statistics on access, usage, and financial consumer protection, based on the information reported by institutions regulated by the CNBV. None of the indicators are disaggregated by sex; it is still, however, a comprehensive data-gathering initiative.

Table 9
Supply-side Data – FI Databases

Access	Usage	Consumer protection
Indicator per 10,000 adults and number of access points	**Indicator per 10,000 adults and number of access points**	**Indicator per 10,000 adults**
Branches Bank correspondents Automatic teller machines (ATM) Point of sale terminals (POS) Establishments with POS Accounts using mobile phones	Transactional accounts (various types) Term deposits Debit cards Credit cards Mortgage loans Group loans Personal loans Salary Automobile loans POS and ATM transactions	Complaints settled by CONDUSEF

Source: CNBV.

With regard to demand data, the CNBV prepares, in collaboration with the National Institute of Statistics and Geography (Instituto Nacional de Estadística and Geografía, or INEGI), the National Financial Inclusion Survey (Encuesta Nacional de Inclusión Financiera, or ENIF). This survey seeks to generate data on financial service access and usage with a view to identifying the main barriers and, on this basis, designing evidence-based public policies to promote FI. The ENIF is carried out every three years; the first survey was conducted in 2012. The survey is taken of the adult population (aged 18–70), and interviews 7,000 households. The results are representative

at the national level by type of locality (urban and rural). It is interesting to note that in this case the data are disaggregated by gender.

Table 10
Demand Data - The ENIF

Gender-disaggregated categories of indicators
Sociodemographic characteristics
Expenditure management
Formal and informal saving
Formal and informal credit
Insurance
Retirement savings accounts
Remittances
Access to financial channels
Financial literacy and consumer protection

Source: ENIF. See full details of the indicators in Annex 7.

Finally, it is worth mentioning that in the latest reforms published in the Credit Institutions Law (Ley de Instituciones de Crédito),[31] a section has been included denominated On Inclusion, Promotion of Innovation and the Gender Perspective (De la Inclusión, Fomento de la Innovación y Perspectiva de Género), which establishes that development banking institutions must promote equality between men and women, encourage FI for children and young people, and adopt a gender perspective in their products and services. Disaggregating data by sex would be a tool to help banks make decisions in pursuit of that objective.

5. Proposal for Sex-disaggregated Supply-side Indicators

a. Principles that the Indicators Should Satisfy

For the data on FI to provide a solid basis for decision making by authorities and financial institutions, a set of criteria should be met. In line with what international agencies such as the G-20 and AFI (see Sections 3.b and 3.c) have established, the indicators selected should satisfy the following principles:

a) *Usefulness and relevance.* This applies to various dimensions. First, the indicators must be useful and relevant for formulating evidence-based public policies for promoting greater FI by taking gender-related characteristics into consideration. Second, the indicators must also help financial institutions design appropriate products and market strategies for each gender.[32] Third, they must be useful for establishing actions aimed at the financial sector and, moreover, contribute to the public policies of other public-sector offices aimed at defining gender strategies, economic aid, technical assistance, or other interventions. Fourth, they must identify different behaviors or characteristics in accordance with gender, for example, in the

[31] Mexico: Credit Institutions Law (Ley de Instituciones de Crédito), latest reform DOF 10-01-2014. CAPÍTULO II - De the Instituciones de Banca de Desarrollo. Artículo 44 Bis 4.
[32] In this way, the banks can offer not only tailor-made products for the needs of women, but they can also improve the products offered to men. In other words, FI will improve for both groups.

propensity to save, the kinds of credit products demanded, housing finance products, and the levels of arrears, among others.

b) *Pragmatism.* Data collection should be achievable in a reasonable time frame and by taking advantage of existing data to minimize costs and effort. The data must be compatible with the gender indicators that some countries collect (as in the case of Chile), with a view to providing continuity to the historical series. Data must also be compatible with the FI indicators of the LAC countries that already gather data, since these are aligned with international standards and their disaggregation by sex is relevant according to the previous criteria.

c) *Consistency.* Closely related to the previous principle, the indicators must offer standardized definitions that support homogeneous measurement and comparability at different times and in different countries. As far as possible, and to avoid imposing an excessive workload on countries, the indicators should be harmonized with the data collection initiatives of international organizations (for example, the IMF's FAS).[33]

d) *Periodicity.* Regular compilation is feasible and desirable for supply-side data given that this helps facilitate the task over subsequent exercises. The variables costs are reduced insofar as data gathering and the creation of reports become a question of routine for both the regulator and for the banks.

e) *Aspiration and flexibility.* The indicators seek to reflect a combination of relevant information to promote FI by including the gender dimension. To achieve this goal, more efforts and funds will be required in nearly all the countries since, except for Chile and to a much lesser extent Colombia,[34] no other country in LAC disaggregates supply-side data by sex. The countries should seek to build the indicators exactly as they are defined, given that this enables criteria to be harmonized and international comparisons to be made. However, for the sake of flexibility and pragmatism, when this is not possible, any necessary adjustments can be made to calculate them, either by using local definitions more in accordance with the national context or by using proxies for a certain indicator.

b. Proposed Set of Supply-side Indicators

The G-20,[35] the specialized literature, and national and international initiatives[36] all agree on the importance of including indicators that address at least three FI dimensions:

- A*ccess to financial services*, which refers, among other things, to the number of branches, ATMs, and bank correspondents, so that the services can reach the clients.
- *Use of the services*, measured, for example, by the number of savings accounts and loans and of account holders as a proportion of the population, the value of these accounts in terms of GDP, and characterizing the market segments that use the different services. The segments can be divided according to income, sex, age, and other demographic variables.

[33] For example, when this is an indicator that the regulators report to the IMF's FAS, the total indicator (without disaggregation by sex) must be consistent with its breakdown between men and women. To use a trivial example, if the total is obtained by adding, then the addition of the indicators for men and women, collected and reported at the national level, should be consistent with the total value that is reported to the FAS.
[34] Only partial information, which refers to credit.
[35] See GPFI (2013).
[36] See CGAP (2012), Ardic, Chen and Latortue (2012) and the initiatives described in Sections 3 and 4.

- *The quality of financial products and service provision*, which includes characteristics such as transparency, security, fair pricing, value for the client, and other principles that are fundamental to consumer protection and financial capacity. Barriers to access, whether they are price related, such as bank charges or minimum balance requirements, are an important component when designing products. A good systems or property registers, provides financial infrastructure, for example with respect to credit information a solid basis for achieving high-quality financial service provision.

Based on existing standards, the experiences analyzed, and the previously mentioned principles, a set of relevant supply-side indicators was identified, to be broken down according to gender.

i. Basic Set of Indicators

It is generally agreed that there is a minimum set of indicators that all countries should compile, based on the G-20 Basic Set of Indicators. Since this is a minimum set approved by the international community, it is an obvious starting point as it also satisfies the principles of usefulness and relevance to the gender dimension. Most countries that collect information in LAC (whether demand-side or supply-side) include all or some indicators that are equal to, or proxies for, the G-20 Basic Set of Indicators,[37] that is, they also satisfy the principles of pragmatism and consistency proposed above. Most of the indicators in the Basic Set correspond to the variable "usage" and only one to "access." The basic indicators include only variables expressed as quantities, as this is one of the easiest to gather, and fail to include amounts or volumes. Countries should gather the total indicator, as well as its segregation between men and women. To simplify the presentation, Table 11 shows each indicator with reference to women, but similar indicators correspond to men and to the total.

[37] See the countries analyzed in Section 4 and the respective annexes.

Table 11
Basic Set of Supply Indicators for Sex Disaggregation (women, men, and total)*

Categories		Indicators
Usage	1. Formally banked adults	Percentage of adult women with an account at a formal financial institution
		Number of women depositors per 1,000 adult women OR number of women's deposit accounts per 1,000 adult women
	2. Adults with credit from regulated institutions	Percentage of adult women with at least one outstanding loan from a regulated financial institution
		Number of women borrowers per 1,000 adult women OR number of women with outstanding loans per 1,000 adult women
	3. Formally banked enterprises	Percentage of women-owned SMEs with an account at a formal financial institution
		Number of women-owned SMEs with deposit accounts/number of deposit accounts OR number of women-owned SME depositors/number of depositors
	4. Enterprises with an outstanding loan or a line of credit from regulated institutions	Percentage of women-owned SMEs with an outstanding loan or line of credit
		Number of women-owned SMEs with outstanding loans/number of outstanding loans OR number of outstanding loans to women-owned SMEs /number of outstanding loans
Access	5. Points of service	Number of branches for every 100,000 adult women

Source: Author's elaboration based on the G-20 Set of Basic Indicators.
* To simplify the table, the indicators are shown only for women. The same indicators should be constructed for men and for the total.

With respect to the usage variables, the first indicator refers to the number of deposit accounts held at a regulated institution, which is the measure of basic bancarization used by both the G-20 and the AFI (AFI, 2013; GPFI, 2011; GPFI, 2013). With a view to measuring whether there is a difference in the degree of bancarization according to sex, it is crucial to compile data for this variable. The existing evidence from the demand side[38] reveals gender gaps in savings account ownership. In contrast, the special case of the supply-side data compiled by the SBIF in Chile[39] shows that, at present, in that country, there has never been a noticeable gender gap in the number of savings accounts held and, in recent years, it has been in favor of women.[40]

The second category of indicators relates to credit. As previously seen, in certain countries data disaggregation by sex arose precisely as an incentive to approve measures that would help improve access to credit for women, given that there were noticeable gender gaps.[41] The Global

[38] See the Global Findex data compiled in Annex 1 and the FI survey results from Mexico and Colombia mentioned in Section 4, which find that gender gaps exist.
[39] See the case of Chile in Section 4.c.
[40] The situation was not always thus. One of the instruments that helped to close the gender gap was the State Bank's *Cuenta RUT*, which is a very easily accessed current account. See: www.bancoestado.cl and GBA (2016), a work in progress.
[41] This is true of Chile, commented in Section 4, and in the case of India, also mentioned in that section.

Findex demand-side data show that gender gaps exist in access to credit, using measures such as the proportion of men and adult women that access it. According to these data, in the majority of countries there are gaps in favor of men, although in certain countries the situation is inverted.[42] Abundant specialized literature and studies seek to explain the reasons behind the gender gap in credit: discrimination arising from the legal framework; scant availability of assets to offer as collateral; the design of credit information bureaus, which does not help women to build credit histories; and poor design or lack of a legal framework for real estate guarantees, to mention just a few.[43]

The third and fourth sets of indicators correspond to the use of financial services by SMEs. On the one hand, SME bancarization is measured by the deposit accounts they have, whether as a proportion of the total number of SMEs, of total deposit accounts, or of depositors. Diverse studies by the G-20 show that, in emerging markets, between 70 and 76 percent of all SMEs have a relationship with a bank by holding a deposit account (G-20, 2010), even when they do not have access to credit. There is also evidence that shows that access to savings instruments, such as a deposit account, positively affects the amount that women invest in their businesses (IDB, 2015; Mehra et al., 2012). There are few measurements of the gender gap in SME bancarization that would enable horizontal comparisons to be made among countries or over time, for which the measurement of this aspect is crucial. On the other hand, access to credit by SMEs, disaggregated by sex, is measured. In LAC, women represent a high proportion of entrepreneurs; specifically, a high percentage of female ownership is concentrated in smaller enterprises (IDB, 2015). Among the factors that cause these gender gap are differences between men and women in terms of training and commercial abilities (IDB, 2015, paragraph 2.44) and a lower relative availability of assets to offer as collateral and bank credit policies that, when they are restrictive for this segment, end up by affecting women relatively more than men, given the higher share of women in this segment (GPFI, 2013; IDB, 2015; Pailhé, 2014).

The final indicator relates to access, measured by the number of branches in relation to the total population and with regard to men and women. This is a very high-level indicator that does not provide information on the distribution or proximity of the branches with respect to their clients, specifically whether there is a gender difference in that distribution. Even so, this can be understood as a measurement that offers the first indication of the availability of bank branches, which represent the most traditional channel of access to financial services. For this reason, it should be included.

i.i Challenges to Measuring the Basic Set of Indicators

There are some challenges that should be considered when constructing these indicators. The first is disaggregation by sex of deposit account data. All countries enjoy some degree of protection with respect to information on financial entities' liabilities, which probably means that regulators might not have the information needed to enable them to break down this information by themselves. In this case, financial institutions should be asked to identify the gender of their

[42] See in Annex 1 the gap in the percentage of men and women that who declare they have an outstanding loan, based on Global Findex data.
[43] Broader references can be found in IDB, World Bank, and GTZ (2010) and Pailhé (2014).

depositors, or any other institution in the financial system that owns such information. An example is the case of Colombia, where the credit bureau has data on deposit accounts and can carry out disaggregation by sex, at least for a proportion of the total database. It is not necessary to identify the person's name, as this might represent a violation of financial secrecy laws. Internally, financial institutions hold information on their depositors; the capability to rapidly classify these data by gender depends on the quality and sophistication of their information systems.

A second challenge concerns the ability to determine whether a person holds multiple accounts in one or more regulated institutions, to avoid duplication in measuring the number of depositors. If a person has more than one account with an institution, a bank that manages its businesses effectively should have systems in place to determine how many deposits each client holds. Thereafter, the regulator will face the challenge of avoiding duplication at the aggregate level when collecting information from the entire financial system, maintaining due respect for bank secrecy laws. These difficulties depend to a large degree on the restrictiveness of the legal framework in each country and on the design of the financial regulator's data-gathering architecture.

A third challenge is disaggregating loan data by sex. In countries with a public credit registry, it is likely that the regulator can use the credit information contained in it and either obtain sex-disaggregated data from there—if this separation can be obtained by using some of the variables already existing in the credit bureau, such as the tax code or the identity number–[44] or complementing the data with other information, for example, from the civil registry offices or the internal revenue service.[45]

Fourth, and related to the previous point, it is important to define the term "women's SME." First, each country must adopt the definition of SMEs that is most appropriate according to its own legal and regulatory framework. Thereafter, within this universe, a country must further define what it considers to be a women's SME and, analogously, a men's SME. At the international level, the International Finance Corporation (IFC) defines a "women's business" as a firm with: (a) ownership or participation by women greater or equal to 51 percent; or (b) at least 20 percent ownership by one or more women and a woman is either the chief executive officer (CEO) or the chief operations officer (COO) and women must comprise at least 30 percent of the board of directors (if there is one) (IFC, 2013). For its part, the IDB in its Sector Framework Document on Gender and Diversity[46] refers indiscriminately to "women-led businesses" or "women-owned businesses." Although it provides no explicit definition of the terms, when it comes to measuring them, given the difficulties in doing so directly, it uses two proxies*:* businesses in which women are owners of at least 51 percent of the capital and those in which the CEO or the COO is a woman. Furthermore, the IFC Enterprise Survey uses various definitions: firms with women

[44] For example, in the case of Argentina, all loans recorded with the public credit registry are associated with the Single Tax Identification Code (Clave Única de Identificación Tributaria, or CUIT). The first two digits of the CUIT indicate whether the person is a man or a woman, or a business. With respect to personal loans, this disaggregation is direct. For business, what exactly is understood to be a "women's business" must be defined and thereafter complemented with other sources of information.
[45] See in Pailhé (2014) how the design of credit bureaus affects financial inclusion for women.
[46] See IDB (2014), p. 27, paragraphs 3.27 and following.

owners, in the event that among the owners there is at least one woman, firms that have a top manager who is a woman,[47] and firms in which the majority share of ownership is in the hands of women.[48] Likewise, the G-20 GPFI, in its work plan, uses the definition of women SMEs according to which *at least one* of the owners of the business is a woman.[49]

The IFC definition is the most complete, but if part (a) of the definition cannot be used, then part (b) can become rather complex for banks to measure. In line with the principle of pragmatism, it might be acceptable in the first instance for countries to use the definition of women-owned business, understood as one in which women are owners of at least 51 percent of the capital or a business whose CEO or COO is a woman (women-led business), in line with the measurements cited by the IDB in its report on gender diversity, since they are less complicated to measure. As there might be heterogeneity among countries and even among banks in the same country with respect to their capacity to measure these concepts, they can use the principle of flexibility, so that they adopt the definitions that, in addition to being relevant, are easiest to measure in each country. However, in line with the principle of aspiration, insofar as the systems of measurement become more consistent, countries should tend to use the most comprehensive definitions, following the style of the IFC definition, since it enables the problems associated with women's businesses to be better understood. Making these definitions more specific has the advantage of helping to uncover and, therefore, to address restrictions that might otherwise not be identified.[50]

A final challenge with respect to the indicators is that the information that they contain corresponds only to regulated (formal) institutions, which are those from which the financial regulator collects most information. Moreover, as they are basic, these indicators do not disaggregate data by type of financial institution.

ii. Broad Set of Indicators

The Broad Set of Indicators includes variables for the three dimensions of FI: access, usage, and quality. They were chosen to satisfy the previously mentioned principles. In line with the principles of pragmatism and consistency, the global supply data initiatives, particularly the IMF's FAS, the G-20 Broad Set of Indicators, and existing national demand and supply initiatives, were taken as a useful and relevant basis for disaggregation by gender. The set of selected indicators are shown in detail in Table 12. The proposed Broad Set includes the Basic Set of Indicators from the previous section. The countries should compile the total indicator and disaggregate it between men and women. To simplify the presentation, Table 12 shows each indicator with regard to women, but similar indicators correspond to men and to the total.

The access and usage indicators are differentiated, for the most part, by type of financial institution: commercial banks, CUFCs, and MFIs. The IMF's FAS also disaggregated these data. This division is useful for observing if there are significant gender differences according to the

[47] The term "top manager" is not clearly defined; it is understood to be at least a CEO.
[48] See IFC (2015), the section on "Gender," pp. 55 and following.
[49] See GPFI (2015c), p. 9 and footnote 16.
[50] For a deeper and broader analysis, see Piras, Presbitero, and Rabellotti (2013).

type of service provider and thereby helping to design specific policies or programs for each type of financial entity. Some countries show clear evidence that women account for a high proportion of MFI and CUFC clients. This is the case of Chile, where one public bank also has a considerable portfolio dedicated to this segment (GBA, Data 2X, ECLAC, and MIF-IDB, 2016).

Table 12
Broad Set of Supply Indicators to be Disaggregated by Sex (women, men, and total)*

Indicator	Reference
I. Access to financial services	
Branches, ATMs, and agents or correspondents, disaggregated for commercial banks, CUFCs and MFIs	Per 100,000 adult women
II. Usage of financial services	
a. Bancarization	
Percentage of adult women with a deposit account at a formal financial institution, disaggregated for the total of institutions, commercial banks, CUFCs, and MFIs	Total of adult women
b. Number of deposit accounts/ depositors and of loans/borrowers	
Number of deposit accounts of women/depositors (total, individuals, and SME) with commercial banks, CUFCs and MFIs	Per 1,000 adult women
Total deposits	
Savings accounts	
Term deposits	
Current accounts	
Basic accounts	
Savings accounts for housing	
Number of loans to women/ women borrowers with commercial banks, CUFCs, and MFIs	
Total loans	Per 1,000 adult women
Consumer	
Commercial	
SME	
Housing	
c. Volume and financial deepening	
Amount of deposits by women (total, individuals, and SME) with commercial banks, CUFCs, and MFIs	Percentage of GDP
Total deposits	
Savings accounts	
Term deposits	
Current accounts	
Basic accounts	
Savings accounts for housing	
Amount of loans to women by commercial banks, CUFCs, and MFIs	
Total of loans	Percentage of GDP
Consumer	
Commercial	
SME	Percentage of GDP
Housing	
d. Mobile money	
Outstanding amount in active mobile money accounts in a woman's name	
Amount of mobile money transactions made by women during the reference year	
III. Quality of financial services	

a. Loan portfolio delinquency Amount unpaid (arrears greater than 90 days) Total loans Consumer Commercial SME Housing	As a percentage of total women's debt
b. Costs Average cost of opening a current account held by a woman Average cost of maintaining a current account held by a woman	Local currency units
c. Credit barriers Amount of credit to women's SMEs with collateral	Percentage of total amount of credit to women's SMEs
Number of women's SME borrowers with collateral	Percentage of total women's SME borrowers
d. Claims by clients Number of claims made by women to the financial consumer protection authority throughout the year, in accordance with the rules in each country, and the number of settled claims: Total number Related to financial institutions' liabilities (deposits) Related to credit products Related to charges and commissions Related to false publicity	Number and percentage of the total for each type of claims

Source: Author's elaboration.

* To simplify the table, only the women-specific indicators were listed, although a similar list of indicators corresponds to men and to the total.

The first proposed group of indicators corresponds to access. On top of the traditional bank branch channel included in the basic set are added ATMs and bank correspondents. In recent years, these have been used as public policy instruments in various countries as a way of enhancing access to financial services, particularly for the more remote populations, or those with lower income, as in the cases of Brazil (BCB, 2015; Lyman, Ivatury and Staschen, 2006; Siedek, 2008), Colombia (SFC and BdO, 2014), or Peru (SBS, 2015). Disaggregation by sex is relevant given that the demand-side data reveal different gender-related behaviors. For example, in Colombia, the demand data study shows that men are more likely to use ATMs (81 percent vs. 66 percent women), while women are more likely to visit the bank branch (24 percent vs. 11 percent men) (see Section 4.b and SFC, BdO and Ipsos, 2015).

The second group of indicators refers to usage. The degree of bancarization (Indicator II.a), as in the Basic Set, is measured by having a deposit account, and the reasons for breaking down this data by gender were explained in the previous section. The variant introduced here is disaggregation by type of financial institution (bank, CUFC, MFI), since it can generate evidence on the type of institution that contributes more to the bancarization of women and men, for example, if women prefer to open an account with institutions of a more regional nature or that have branches or points of service that are closer to the home.

The second component of usage (Indicators II.b) refers to the number of deposit accounts (and the number of depositors) and to loans (and number of borrowers); also included in the Basic Set. With respect to the information on deposits, two additional categories to those of the Basic Set are proposed. The first refers to separating depositors according to whether they are natural persons (individuals) or enterprises, and within the latter, identifying the SMEs. This separation is important because there is thought to be a considerable lack of information in this sense and because this separation is significant for the gender question. For example, in the case of Chile, the supply-side data show that the gender gap hardly exists and has even inverted in women's favor when it comes to having savings accounts, but the data only include natural persons (SBIF, 2015). Within the enterprises, it is important to identify the SMEs, as proposed by the AFI and the G-20, given that, as explained in the previous section, studies show that in emerging markets a high percentage of SMEs have a relationship with a bank through having a deposit account, even when they have no access to credit (see Section 5.b.i). Moreover, as previously mentioned, some evidence shows that accessing savings instruments has a positive impact on the amounts that women invest in their businesses (Mehra et al., 2012; IDB, 2015).

The second category refers to the separation of deposits by type, given that usage differs notably between the different types of deposits. For example, the case of Chile shows that women hold the majority share of the stock of housing savings accounts (SBIF, 2015), and that there is a gender gap associated with the coverage of bank products aimed at cash management, since bank accounts of this type associated with women are significantly fewer than those contracted by men (9 percent lower in 2014; SBIF, 2015). The gap is much more significant among current account products because the credit history needed to open these accounts can be harder for women to obtain, as they may not have previously had access to banking, either because they are housewives without their own funds or because their activities are informal (SBIF, 2015).

With respect to the loan data, the information from the Basic Set should be separated by type of loan. This would help to fill the information void, particularly with respect to commercial credit. The scant sex-disaggregated data available are gathered for the most part from natural persons. This means they are mainly associated with consumer loans and exclude business loans, except when dealing with small businesses in the owner's own name, in which case the debts are typically classified as either consumer or commercial according to their value, as in the case of Chile (SBIF, 2015). Loans are the variable that has received the most attention from policymakers when it comes to improving financial access for women, whereby separating this information becomes crucial for accurately identifying the gaps that affect each type of financing and for proposing appropriate policy actions for each segment. Linked to this debate, the G-20 has emphasized the importance of improving supply-side data concerning SME financing. Sex disaggregation would contribute to that objective.[51]

The third component of the usage variables includes information on the volumes of deposits and loans (Indicators II.c). This is an innovation with respect to the Basic Set, which only includes quantities. Those variables, without disaggregating by sex, are included in the IMF's FAS and in the G-20's Broad Set of Indicators. With respect to deposits, evidence points to a gender gap in

[51] In its plan of action to improve financing for SMEs, GPFI (2015c).

the amounts of deposits held by men and women. For example, in Chile, the overall amount of savings accumulated by women is less than that of men (4 percent lower in 2014). However, in fixed-term savings account products and housing savings accounts, the reverse is true. In Chile, overall, the average balance of women's saving is lower than that of men (30 percent lower in 2014; SBIF, 2015), which could be explained by women's lower participation in the labor market, as well as by the salary differentials documented in several of the studies (GBA, Data 2X, ECLAC, and MIF-IDB, 2016). However, when it comes to savings products such as term savings accounts (general and housing) and voluntary pensions, over recent periods women show higher average balances than those of men, which may be attributed to women's higher propensity to save. Evidence of this type is extremely relevant for public policymaking, given that equal behavior by men and women is often assumed. In the case of Chile, there are also noticeable differences in the amounts of cash managed by men and women using current accounts and sight accounts. In 2014, only 33 percent of the total balance managed using these products correspond to women, and the coefficient between the average balance managed by women and the average balance managed by men was 55 percent. These behaviors, associated with gender-differentiated bank balances, seem to fundamentally reflect the income gaps that affect men and women (SBIF, 2015). A significant limitation of the Chilean data is that it refers only to natural persons, which means it must be complemented with information on enterprises in general, and on SMEs in particular, to understand the behaviors and the gender gaps that affect these segments.

With regard to loans, there is evidence of gender gaps in the amounts loaned. For example, supply-side data from Chile reveal that women's average debt is significantly lower than that of men, in a range of between 60 percent and 71 percent of men's average debt (SBIF, 2015). It is estimated that two factors might be affecting this: more conservative behavior by women and the income gaps with respect to men, which hamper access to bigger loans. Analysis by type of loan is also significant, since the causes that explain the gaps differ in this dimension. Chile's case also shows that in this country women's bank debt has a housing debt component that is greater than men's in percentage terms: for every 100 monetary units of credit contracted by women, 60 units are associated with mortgage financing for housing, while in the case of men the analogous figure is 55 monetary units (SBIF, 2015). Also, in the case of business loans, there is evidence that women access smaller loans. In the area of microcredit in LAC, whereas women enjoy significant access in terms of the quantity of loans (representing 57 percent of microcredit borrowers in LAC), they face significant barriers when it comes to accessing higher amounts of credit (IDB, 2014; Martínez et al., 2014). The size of the enterprise is a determining factor in the flow of funds. Therefore, smaller enterprises with lower flows of funds will obtain smaller loans, in accordance with their ability to repay. There is evidence that women own relatively smaller enterprises than their male counterparts, they are less familiarized with credit instruments of greater value,[52] and they prefer to finance their business with savings than with loans.

The fourth component of the usage indicators is mobile money (Indicators II.d): the amount outstanding and the amount of transactions made. Although this model does not operate in all countries, it has been growing in importance in recent years. The IMF's FAS defines mobile

[52] Also, women ask for loans less frequently, seek smaller loans, depend more on informal sources of income, and seem to show higher risk aversion or fear when it comes to applying for a loan. See IDB, World Bank and GTZ (2010).

money accounts as those held with a service provider,[53] accessed chiefly through a mobile telephone, and used for mobile money transactions, such as a payment or transfer to a third party, including so-called peer-to-peer (or P2P) transfers (IMF, 2015), settlement of accounts payable, payments to traders, and international remittances. The Global Findex data show that although the use of mobile money accounts is still low in LAC, 2.4 percent of men use them to settle accounts compared to 1.2 percent of women; 2.6 percent of men receive money, compared to 1.2 percent of women, and 1.1 percent of men use them to send money, compared with 0.6 percent of women (Pailhé, 2014). There is no information disaggregated by sex on the amounts involved in these transactions; the IMF's FAS compiles these data without making this separation, whereas the indicators proposed here cover this information gap.

The available evidence is mixed with respect to the role of mobile money accounts when it comes to closing the gender gap. Studies by the G-20 GPFI (GPFI, 2015d), based on Global Findex data, highlight that there is a gender gap in mobile money account ownership, but it is less pronounced than the gender gap seen in ownership of formal accounts. The easy access and the affordability of mobile money accounts could considerably benefit women, who—due to cultural norms, family responsibilities or lower salaries—might be less able to travel to the nearest bank branch or comply with minimum balance requirements. In fact, the Global Findex data show that in countries such as Kenya and Ivory Coast, there is a gender gap in the ownership, but not in the use, of mobile money accounts. However, in other countries, such as Tanzania and Uganda, men are more likely than women to have a mobile money account, as well as an account with a bank or financial institution.

The Broad Set envisages the dimension of quality, which the Basic Set does not consider. The first quality indicator includes the level of arrears in the loan portfolio (Indicator III.a). The scant information on arrears disaggregated by sex, from Chile, evidence better payment behavior by women, since the indicators of men's arrears are higher than those of women (SBIF, 2015). This might not be attributable solely to the borrowers' payment ethics, as has been argued in the microcredit industry, but also to the fact that both women and the banks are more conservative, given that the debt-to-income ratio (a parameter that the banks consider when they approve a loan) is lower for women in relation to men (GBA, Data 2X, ECLAC and MIF-IDB, 2016). Data on the level of arrears should be separated by type of loan, given that the factors that explain the ability to pay differ for each type. Arrears are defined as a delay in payment of more than 90 days, which is the most internationally accepted criterion.

Quality also includes indicators of current account costs (Indicator III.b). This indicator is suggested by the G-20 and measures the cost of opening and maintaining a current account (GPFI, 2013). Separation by sex is relevant because when opening a current account, financial entities make a credit assessment of the borrower to establish the maximum amount that will be set as a withdrawal limit. The existence of cost gaps between men and women might provide clues as to whether financial entities establish different prices according to the different risk

[53] Mobile Money Service Providers (MMSPs) are defined as the telecommunication companies or other entities that associate with mobile operators to offer mobile money services to their clients, through agents who are independent of the traditional banking network. See IMF FAS (2015).

expected from men and women. Combined analysis of this indicator with the credit quality indicator provides financial institutions with good information for establishing better price-fixing mechanisms, which reflect the different expected levels of arrears.

The collateralized financing for SMEs indicator (Indicator III.c) is also included under the financial quality heading. This indicator measures the existence of differential barriers faced by men and women when seeking credit. This is due to the fact that the ability to generate consistent cash flows and the assets that loan seekers can offer as collateral are the very factors that financial institutions use to establish their clients' ability to repay. Therefore, both asset-owning capacity and wealth accumulation patterns in an economy influence people's chances of accessing credit. If societies are very unequal in terms of women's legal capacity to own and freely dispose of assets, or if the share of assets is biased toward men for social and economic reasons, then the financial system will reproduce those situations and women will encounter impediments that hamper full access to credit (Pailhé, 2014).[54] In addition, collaterals are often used as a way of covering weaknesses in other areas that affect women's borrowing capacity, for example, for less productive enterprises. There is some evidence that women-owned micro and small enterprises are less productive than those owned by men: the value added per worker is lower, with a significant difference in LAC. Part of this difference arises from the fact that women are overrepresented in low-productivity sectors (Sabarwal et al., 2009, quoted in IDB, 2014). But as women entrepreneurs overcome the barriers to growing their businesses, then their medium- to large-sized enterprises become as productive as men-owned enterprises (World Bank, 2010; IDB, 2014), which could lead to an easing of credit conditions.

Finally, the quality category also includes an indicator of the claims made by clients, broken down according to the type of complaint (Indicator III.d). The G-20 and OECD Principles on Financial Consumer Protection establish that countries must ensure that consumers have access to complaint and settlement mechanisms that are accessible, independent, accountable, and affordable. Financial service providers must have mechanisms for managing and settling complaints, and there must also be a body before which consumers can lodge complaints not efficiently dealt with by the financial institutions (G-20 and OECD, 2011). The proposed indicators seek to capture the number of complaints that reach this body. Similar indicators are collected in the supply-side data for Mexico (see Section 4.d) and Colombia (see Section 4.b and Annex 5). The G-20 also recommends the aggregate information regarding complaints and their settlement should be publicly disclosed, and these indicators help toward that objective. Likewise, the G-20 emphasizes that special attention must be paid to the way financial institutions treat vulnerable groups of clients, and disaggregation by sex would also contribute in this regard.

One further aspect refers to gender diversity in the institutional sphere, both for the regulator and for financial institutions. Although the Broad Set does not include indicators for these aspects, to avoid overloading information gathering, it would be useful to compile supply-side data referring

[54] For example, there is evidence that the access to goods and patterns of asset accumulation might help to explain why women entrepreneurs have relatively smaller-sized enterprises. See IDB, World Bank, and GTZ (2010).

to these aspects. The Chilean case can also serve as a model of gender diversity in the financial system (SBIF, 2015).

ii.i Challenges to Measuring the Broad Set of Indicators

In terms of challenges to designing these indicators, those mentioned in the proposal for the Basic Set also apply in this case. First, constructing the access indicators should present the least difficulties and it should be very inexpensive for regulators to separate the variables of access according to gender, since they usually already have information from the channels of access, which must thereafter be complemented with demographic data on men and women.

Second, with respect to the usage indicators, further aspects must be added to the challenges already mentioned in the section dealing with the Basic Set (not to be repeated here). For deposit-related data, there is the extra challenge of separating this information by type of depositor (natural persons, enterprises in general, and SMEs) and by type of deposit. Information disaggregated by type of deposit at the aggregate level for all depositors is normally part of the statistics held by all central banks or financial regulators, which means that the banks should have a system for reporting this information to the regulator. Obviously, this is generally reported at the aggregate level, without distinguishing the type of client or gender. The difficulty in making this disaggregation depends on the design of the current systems for reporting to the regulator and the banks' own internal systems. Financial institutions already have the information needed to disaggregate data on their own clients; the costs and difficulties depend on the quality of their internal information systems, and a wide variety of situations can be found within the same financial system. Disaggregating the data with the proposed criteria can probably only be done with the flow of new information, given that disaggregating the stock of existing data can prove to be very expensive. Moreover, this difficulty also arises regarding the total aggregate of depositors in the system; how to prevent duplications when it comes to compiling the aggregate statistics for the entire financial system. To avoid such a situation, a system must be established for codifying each client's data that, at the same time, does not infringe bank secrecy regarding information on deposits. Likewise, it is important here to clearly define what constitutes a "women's SME," by adopting the same criteria mentioned in the previous section.

Regarding loan data, regulators should attempt to obtain most of the data from their public credit registries. They will probably encounter most difficulty when it comes to identifying loans to women's or men's SMEs, according to the definition proposed in this paper. As mentioned in the previous section, the financial institutions themselves should probably make this classification, as they should be aware of their client SMEs' property and management structure, which are the variables needed to classify them with a view to disaggregation by sex.

Furthermore, mobile money data should be demanded from service providers, so that they can disaggregate by sex their client database. As previously observed, some countries already collect supply-side information concerning this service, and service providers should therefore be called on to identify this dimension. However, depending on how service provision is structured, it might be that this information is in the hands of the telephone companies, and their collaboration may be necessary for separating client data by gender.

Third, some challenges faced when constructing the indicators of quality may also be mentioned. The arrears indicator separated by sex can, in principle, be constructed from the public credit registry alongside with the complementary data sources needed to identify the type of loan. The degree of difficulty and the costs will depend on the current design of the credit registry, as well as on the quality of the banks' internal information systems. For their part, details of current account costs should be obtained from the institutions themselves, using internal client data. As far as deposit data are concerned, institutions should disaggregate by both type and sex. In this same combination of data, an information field should be added to the current account deposits of each client that shows the cost of opening a current account (for new clients in the year), or the cost of maintaining a current account, for existing clients. If the information is reported annually, the cost should be calculated as the average over the 12 months of the year. It should be expressed in local currency but could be converted into U.S. dollars for the purpose of international comparisons.

With regard to information concerning collateralized operations with SMEs, many credit bureaus already have data on the collateral that covers each operation, in which case this variable would not add more difficulties. If the contrary is true, the regulator should use other sources of information or require financial institutions to add this variable to the information on each borrower that they report to the credit bureau or to the public credit registry. With regard to measurement, "collateral" may be whatever the regulations of each country agree that it is for the purpose of credit risk mitigation.

Fourth, information on claims can imply higher or lower data-gathering costs according to the way in which the current data compilation system of financial institutions and regulators is structured. The data compilation infrastructure associated with financial consumer protection has become more sophisticated in recent years, driven by international efforts such as those of the G-20. In some cases, regulators have databases of complaints by clients; in others, the consumer protection authority holds the data, or perhaps a combination of both. For the countries that already compile information of this type for their FI reports, the main challenges are to include disaggregation by sex and to classify this type of claim in accordance with the proposed methodology.

Finally, two further challenges are worth highlighting, since they apply generally to all the proposed indicators. The first is the state of the *habeas data* laws that relate to financial sector data in each country. Typically, with the increased use of data storage systems, personal data identification, searching, and trawling, regulations to protect people's rights to personal data have been extended by both *habeas data* laws and personal data protection laws. Collecting the proposed indicators might be affected by the restrictiveness of the contents of these laws. Furthermore, the influence of specific anti-discriminatory laws or practices that might exist in each country is worth mentioning. If the legal and regulatory frameworks are very restrictive, the use of gender as a variable with which to disaggregate data might be considered a discriminatory practice, as would be the design of policies or products that include this variable.

6. Conclusions

Information plays a key role in FI, as it enables policymakers to make evidence-based decisions and financial institutions to better understand the opportunities offered by the market. There is a notable scarcity of sex-disaggregated FI data in general and of supply-side data in particular. The existing supply-side sources at the global level, which enable cross-country comparisons to be made, fail to disaggregate indicators by sex, with very few exceptions.

Comprehensive FI data gathering is still an incipient theme in LAC, since currently only a few countries systematically compile this information. Scarcer still is FI data gathering from the supply side and disaggregated by sex. Only one country in the region—Chile—does so consistently and in consonance with its gender policy.

Based on existing global and national experiences, as well as on best practices backed by international agencies, this paper proposes a series of sex-disaggregated supply-side indicators that are pertinent to FI. The indicators were chosen to satisfy five principles: usefulness and relevance, pragmatism, consistency, periodicity, and aspiration and flexibility.

It is thought that all countries should collect a minimum set of indicators, based on the G-20 Basic Set of Indicators. As the international community endorses this set of indicators, it represents an ideal starting point since most of these indicators are relevant from a gender perspective. Most countries that collect sex-disaggregated data (whether demand-side or supply-side) include all or some indicators equal or similar to the G-20 Basic Set. Thereafter, a broader set of indicators is proposed, which includes variables for the three most important dimensions of FI: access, usage, and quality. This set of indicators was formulated based on global supply-side initiatives, particularly the IMF's FAS, but also the G-20 Broad Set of Indicators, as well as national initiatives (demand-side and supply-side). This paper also identifies, for both proposed sets of data, a series of potential implementation challenges that should be considered.

Data-gathering initiatives must be part of a comprehensive FI policy, guided by national FI strategies. The most advanced countries in FI data collection are those that have a strategy and a clear definition of public policy regarding the importance of promoting greater FI. Otherwise, financial institutions will view the new data requirements as a cost. This may hamper internalization of the benefits to be derived from such disaggregation, such as identifying new business opportunities that contribute to the public policy goal of offering extended and better-quality financial services that more fully address the needs of different population groups, specifically the most marginalized.

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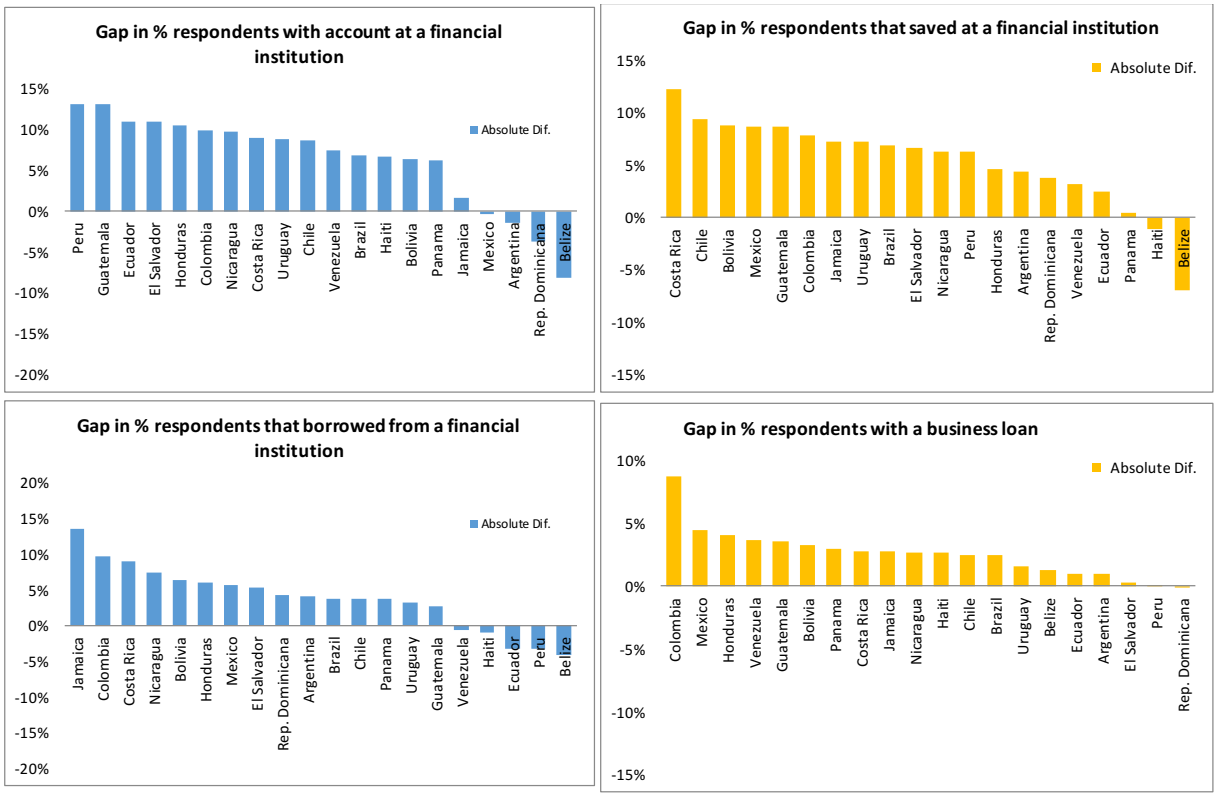
Annex 1

1.1 Gap between Men and Women for LAC Countries 2014



Source: Findex 2014. “Gap” is the difference between the value corresponding to men, minus the value for women. There is no information available from the following borrowing IDB-member countries: Barbados, Guyana, Paraguay, Surinam, and Trinidad and Tobago.

1.2 Evolution of Ownership Gaps
2014 vs. 2011

Region	Account with FI	Savings with FI	Loan from FI
East Asia & Pacific (OD)	-1,6%	0,6%	-0,1%
Europe & Central Asia (OD)	-6,5%	2,6%	2,3%
High income OECD	-2,9%	-1,2%	0,8%
Latin America and the Caribbean (OD)	-3,8%	0,8%	1,9%
Middle East (OD)	2,2%	-0,5%	0,3%
South Asia	1,3%	-0,3%	1,0%
Sub-Saharan Africa (OD)	2,5%	1,1%	0,1%
World	-1,0%	0,3%	0,4%

Source: Author with data from Findex 2014.
OD: Other Developing

Annex 2
Supply-side Databases at the Global Level

Database	Description	Available to public	Gender-disaggregated
IMF- Financial Access Survey	Supply-side data from regulators around the world that contain basic access and usage indicators.	Yes http://fas.imf.org	No
IMF- International Financial Statistics	Currency and bank data. Indicate size and trends in the financial sector, although without providing detailed information on FI.	Yes http://data.imf.org	No
IMF- Financial Soundness Indicators	Measures such as deposits/loans and household debt/GDP can be derived from these data, which add another dimension to FI monitoring	Yes http://fsi.imf.org	No
WB – Global Payment System Survey	Data on payment products; physical range of the payment systems such as automatic teller machines; the legal and regulatory framework and related reforms. The data is compiled from the central banks at the global level. The payment system is one of the first financial services that both individuals and enterprises use, which explains its importance for FI.	Yes http://www.worldbank.org/en/topic/paymentsystemsremittances	No
BIS – Payment System	Statistics on payment and liquidity systems in member countries. Data gathered from central banks and include indicators of retail payment systems, payment instruments, and the wholesale systems used by banks, trading platforms, clearing houses, settlement systems, as well as those used for cross-border transactions.	Yes www.bis.org/statistics/payment_stats.htm	No
WB–Financial Services Survey	Non-periodic survey to some of the largest commercial banks in the world. Contains information on products and services offered, the costs and the procedures, to evaluate the barriers to access.	Yes	No
WB – Remittance Prices Worldwide	Reports the cost of transferring small amounts of money internationally. The data is collected using a so-called mystery shopping approach. It is updated every six months.	Yes https://remittanceprices.worldbank.org/es	No
ECB- Monetary Financial Institutions database	Summarizes monthly information reported by the central banks, the credit agencies and other financial institutions that capture savings, provide credit, or invest in securities. Provides information regarding balances.	Yes http://www.ecb.int/stats/money/mfi.	No

ECB- Bank lending survey	Survey of the Eurozone banks. Evaluates financing conditions. Themes: credit rules for loan approvals, credit terms and conditions for enterprises and individuals, and conditions affecting the demand for credit.	Yes http://www.ecb.int/stats/money/surveys/lend	No
Bankscope	Includes information on the volume of deposits and loans from most of the world's banks.	No https://bankscope.bvdinfo.com	No. Only key persons in banks and enterprises
WOCCU- World Council of Credit Unions	Information at the national level on the number of institutions and members, financial deepening and volume, based on the reports presented by member institutions.	Yes www.woccu.org	No
MIX- Microfinance Information exchange	Information on microfinance institutions (MFIs). Includes financial institutions that provide services mainly to low-income segments of the market. The data include figures relating to scope, cost, and financial performance indicators. **Variables that are reported by gender: IMF staff and credit officers, number of active borrowers, number of outstanding loans, gross loan credit portfolios, number of members of the board of directors, number of managers.**	Yes www.mixmarket.org	Some variables
Microcredit Summit	Data on MFIs, **includes the number of active clients according to their level of poverty and gender**. Updated annually.	Yes www.microcreditsummit.org	Some variables

Sources: CGAP (2012), Ardic, Chen, and Latortue (2012) and author's elaboration.

Annex 3
AFI. FI Indicators Base Set for SMEs

Category	Indicator	Note	Source
Access Indicators			
Access points	Number of access points per 10,000 adults	AFI Core Set Indicator	Supply side
Coverage of access points	Percentage of administrative units with at least one access point	AFI Core Set Indicator	Supply side
Coverage of access points	Percentage of total population resident in administrative units with at least one access point	AFI Core Set Indicator	
Digital financial access	Percentage of enterprises with access to digital financial services		Demand side
Credit access	Percentage of SMEs required to provide collateral on an existing loan	OECD	Demand side
Usage Indicators			
Formally banked enterprises	Percentage of SMEs with a deposit account at a regulated financial institution	G20 Indicator	Demand side
Enterprises with outstanding loan or a line of credit	Percentage of SMEs with an outstanding loan or line of credit at a regulated financial institution	G20 Indicator	Demand side
Quality Indicators			
SME Loan guarantees	SME loan guarantees as a percentage of SME loans (in terms of value)	OECD	Supply side
Relative cost of credit	Difference between average SME loan rate and average corporate loan rate	Based on OECD	Demand side
Women-owned (WO) SME*	Percentage of WO SMEs with a deposit account at a regulated financial institution		Demand side
Women-owned (WO) SME*	Percentage of WO SMEs with an outstanding loan or line of credit at a regulated financial institution		Demand side
Non-performing loans	Percentage of non-performing SME loans with respect to total loans and to SME loans	Based on OECD	Supply side

*AFI does not define what it considers to be a "women's SME," but suggests that each country should use the definition it considers most appropriate.

Source: AFI (2015b).

Annex 4

Supply-Side Data: The International Monetary Fund's Financial Access Survey

A. Geographic outreach	B. Use of financial services. Number of accounts
1. Commercial bank branches per 1,000 km^2 2. Credit union and financial cooperative branches per 1,000 km^2 3. Microfinance institution branches per 1,000 km^2 4. Commercial bank branches per 100,000 adults 5. Credit union and financial cooperative branches per 100,000 adults 6. Microfinance institution branches per 100,000 adults 7. Automatic teller machines per 1,000 km^2 8. Automatic teller machines per 100,000 adults 9. Number of registered agent outlets per 1,000 km^2 10. Number of registered agent outlets per 100,000 adults 11. Number of active agent outlets per 1,000 km^2 12. Number of active agent outlets per 100,000 adults	23. Deposit accounts with commercial banks per 1,000 adults 24. SME deposit accounts with commercial banks (percent of non-financial corporation deposit accounts with commercial banks) 25. Household deposit accounts with commercial banks per 1,000 adults 26. Deposit accounts with credit unions and financial cooperatives per 1,000 adults 27. Deposit/customer accounts with all microfinance institutions per 1,000 adults 28. Loan accounts with commercial banks per 1,000 adults 29. SME loan accounts with commercial banks (percent of non-financial corporation loan accounts with commercial banks) 30. Household loan accounts with commercial banks per 1,000 adults 31. Loan accounts with credit unions and financial cooperatives per 1,000 adults 32. Loan accounts with all microfinance institutions per 1,000 adults 33. Number of mobile money transactions (during the reference year) 34. Number of registered mobile money accounts per 1,000 adults 35. Number of active mobile money accounts per 1,000 adults
B. Use of financial services. Account holders	**B. Use of financial services. Volume of accounts**
13. Depositors with commercial banks per 1,000 adults 14. SME depositors with commercial banks (percent of non-financial corporation depositors with commercial banks) 15. Household depositors with commercial banks per 1,000 adults 16. Depositors with credit unions and financial cooperatives per 1,000 adults 17. Depositors/customers with all microfinance institutions per 1,000 adults 18. Borrowers from commercial banks per 1,000 adults 19. SME borrowers from commercial banks (percent of non-financial corporation borrowers from commercial banks) 20. Household borrowers from commercial banks per 1,000 adults 21. Borrowers from credit unions and financial cooperatives per 1,000 adults	36. Outstanding deposits with commercial banks (percent of GDP) 37. Outstanding SME deposits with commercial banks (percent of GDP) 38. Outstanding household deposits with commercial banks (percent of GDP) 39. Outstanding deposits with credit unions and financial cooperatives (percent of GDP) 40. Outstanding deposits with/provided funds to all microfinance institutions (percent of GDP) 41. Outstanding loans from commercial banks (percent of GDP) 42. Outstanding SME loans from commercial banks (percent of GDP) 43. Outstanding household loans from commercial banks (percent of GDP) 44. Outstanding loans from credit unions and financial cooperatives (percent of GDP) 45. Outstanding loans from all microfinance institutions (percent of GDP)

22. Borrowers from all microfinance institutions per 1,000 adults	46. Outstanding balances on active mobile money accounts (percent of GDP) 47. Value of mobile money transactions (during the reference year) (percent of GDP)

Source: IMF (2015).

Annex 5

Colombia: Supply Indicators Included in the Report on Financial Inclusion 2014

	Some of the indicators included
I. Adults and enterprises with financial products	Percentage of adults with at least one financial product Percentage of adults with at least one active financial product 1st entry product – credit establishments 2ndacquired product – credit establishments Number of enterprises with current account (CA), saving account, credit card (CC), microcredit, consumer loans.
II. Financial coverage	Access points: offices, correspondents, dataphones, automatic teller machines point of service distribution (PSD) per type of institution Evolution of the total number of offices and agents for different levels of rurality
III. Transactional analysis	Participation in transactional channels and amounts transferred: Bank account, automated payments, electronic transfers (ACH), mobile telephone, Internet, audio response, dataphone (POS), automatic teller machines (ATM), and offices Number of transactions made via the network of bank offices and agents Number of transactions made via the network of bank offices and agents according to population size and level of rurality Type of transactions made via mobile telephone, POS, Internet, and aATM
IV. Financial products: savings	Evolution of electronic and traditional savings accounts Evolution of share of accounts according to the type of municipality Evolution of the number of, and balance in, accounts per type of institution: banks, financing corporations, finance companies, finance cooperatives–SFC and SES cooperatives Distribution of balance of accounts per range of minimum salaries Percentage of savings accounts according to the type of municipality
V. Financial products: credit	Percentage per modality in the balance of the total portfolio (commercial, consumer, housing and microcredit) Percentage per intermediary in the balance of the total portfolio (banks, financial corporations, finance companies, SFC cooperatives, National Saving Fund, SES Cooperatives and NGOs) Composition of the commercial / consumer / housing / microcredit loan portfolio per economic sector, type of institution, and level of rurality
VI. Remittances	Evolution of the flow of remittances to Colombia Means of payment of remittances
VII. Financial products: insurance	Percentage of persons insured with personal insurance (funeral expenses, personal accidents, life, group voluntary life, group borrowers life, individual) and damage (fire and/or earthquake, theft, unemployment, household) Number of policyholders per range of monthly premiums Number of policyholders per channel and type of insurance
VII. Approach to financial inclusion quality and wellbeing	Evolution of complaints in 2014 by sector and by theme Number of unresolved complaints Number of complaints settled by product vs. reason 2014

Annex 6
Peru: Supply-side Data. Financial System Indicators. SBS

FI Indicators of the financial system
I. Financial deepening
Financial system loans and deposits as a percentage of GDP
Consumer and mortgage loans as a percentage of GDP
II. Scope of the financial system (FS)
a) Access to financial services
Number of points of service vs number of points of service per 100,000 adult inhabitants
Number of offices and automatic teller machines in the financial system
Number of access channels per 1,000 km^2
Indicators of access to financial services per department
Number of points of service per 100,000 adult inhabitants and number of access channels per 1,000 km^2, per department
Number of points of service per department, by level of poverty
Number of districts with access to points of service of the FS
Distribution of the number of districts and population with access to points of service of the FS
Distribution of the number of districts with access to points of service of the FS per department
b) Use of financial services
Number of borrowers in thousands and as a percentage of the adult population
Number of borrowers as a percentage of the Economic Active Population
Number of deposit accounts in thousands
Number of saving accounts in thousands
Number of borrowers as a percentage of the adult population with at least primary education, all country and departments
Number of cardholders as a percentage of the adult population, all country and departments
Indicators of use of financial services per department
c) Deepening the scope of the financial services
Average credit and deposit over GDP *per capita*
Share of MSE loans and borrowers as percentage of total loans and borrowers
MSE borrowers as a percentage of the total borrowers per department
Number of borrowers and debt per range (total, credit card, MSEs and mortgage)
Distribution of consumer and MSE loans per type of enterprise according to level of poverty
Distribution of the deposits per type of enterprise according to level of poverty

Source: SBS. Peru. Financial Inclusion, Insurance, and Pension Indicators *(Indicadores de inclusión financiera del sistema financiero, de seguros y de pensiones)*. June 2015.

Annex 7
Mexico: Demand-side Data: National Survey of Financial Inclusion

ENIF- Summary of sex-disaggregated indicators
1. Sociodemographic characteristics
Schooling
2. Expense management
Expense register
Source of funds to meet emergencies
3. Formal and informal saving
Percentage of formal saving users
Percentage according to the saving product used
Percentage of informal saving users
4. Formal and informal credit
Percentage of formal credit users, per locality
Percentage of informal credit users, per locality
Percentage of informal credit users, per type of informal lenders
Informal credit users
5. Insurance
Percentage of private insurance users per size of locality
6. Retirement savings
Percentage of retirement savings account users, per locality
7. Remittances
Percentage of adults who receive remittances, per locality
8. Access to financial channels
Percentage of bank branch users, per locality
Operations carried out in branches
Barriers to access to branches
Journey time to bank branch
Percentage of ATM users
Journey time to ATM
Percentage of bank correspondent users, per locality
Percentage of electronic media users
9. Financial literacy and consumer protection
Percentage of saving account users who are aware of deposit insurance
Percentage of payroll account users who are aware of the possibility of changing bank
The institution responsible for settling problems with credit cards