


**FINANCIAL SERVICES FOR DEVELOPMENT:
PROMOTING ACCESS IN LATIN AMERICA**



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Prologue

Access to financial services is a key factor in economic development and social welfare. On the one hand, such services give families access to savings and credit, which allows them to better manage their spending needs for things such as durable goods, property, their children's education or retirement, with the temporal pattern of income perception. For firms, access to credit is key to financing working capital and investment. On the other hand, households and firms need insurance products to manage unforeseeable events at a reasonable cost. Additionally, access to payment technologies via credit or debit cards, checking accounts, and electronic transfers, among other mechanisms, is very important to facilitate transactions, by saving time and ensuring transaction security.

Through these important channels, financial services can spur the accumulation of physical and human capital, such as household welfare and business productivity. However, the development of these markets has not always been as prioritized as needed by economies. Various measures intended to describe the volume of financial intermediation and access to services among households and firms show that there are significant differences between developed and developing economies. Moreover, in the case of Latin America, the lag, especially regarding access, is greater than what would initially be expected considering its per capita GDP.

This new edition of the Report on Economics and Development (RED 2011) seeks to analyze the role that finances play in the development process of Latin America. First, it emphasizes the fact that to understand this role it is important to complement traditional measures of financial penetration, normally associated with the relation between the value of intermediate resources and the overall size of the economy in question, with more direct measurements of access to financial services among the population and firms. The Report provides new information on the different dimensions of various services based on a survey carried out by CAF that was designed to include a wide sample of cities and countries in the region.

The results confirm previous estimates that suggest a low level of access to financial services in Latin America. For example, on average, 51% of the families from a sample of 17 cities in the region have an open account in some type of financial institution. Access to credit is even more scarce: only 12.3% of families have sought and taken out a loan from one of these entities. Such access problems are repeated in almost all of the nations and cover a broad swath of the population; although this phenomenon is particularly acute among the poorest sectors, it is not exclusive to them, but rather extends into the middle and even upper-middle classes. The results suggest that the problems or obstacles that families face accessing financial services, especially the most sophisticated instruments such as credit, could be associated with factors that make it expensive and more difficult to develop the supply of such services within these economies. Noteworthy among these are regulatory and institutional problems that affect the fulfillment of debt contracts, such as the cumbersome legacy of historical instability and macroeconomic crisis.

This publication also highlights the development of microfinance institutions (MFI) and their significant contribution towards bringing these services closer to large segments of the population and microenterprises in the region. The "microcredit revolution" is based on developing innovations that turn historically excluded individuals into viable credit candidates, representing a paradigm change in the business of pro-

viding financial services. MFI combine elements of traditional banking with knowledge of informal financial mechanisms. To a certain degree, MFI represent a “market” solution to the immense demand unmet by the traditional financial system. It is interesting to note that the Latin American microfinance model has allowed MFI high rates of growth and self-sustainment from a financial point view without negative preconceptions, which have continued maintaining important levels of credit aimed at poorer clients.

Finally, the Report analyzes different public policy initiatives that favor access to financial services. These interventions are framed in a new context, characterized by the existence of most specialized instruments that specifically take aim at the problems or market failures which affect the financial system and strengthen a complementary relationship with private banking.

Standing out among these interventions are credit initiatives and capital risk contributions for promoting innovation, the granting of guarantees, factoring, the development of credit registries, the establishment of financial outlets outside traditional banks and the facilitation of low-cost accounts for low-income families. The public bank, especially the development bank, has had and can have, within the State, a decisive role in the implementation and administration of these policies. However, it is worth noting the importance of Corporate Governance for these policies to effectively fulfill their functions. These elements of Corporate Governance respond to the clarity and focus of the mandate and the presence of appropriate regulatory frameworks as factors that favor and promote successful intervention.

With the seventh edition of the Report on Economics and Development, CAF seeks to contribute to the debate on the role that finance, particularly access to financial services, plays in economic development. Various studies show that the development of financial markets is a factor in promoting long-term economic growth and is the result, in part, of the rise in productivity due to the reallocation of capital (and human talent) towards firms and households who have worthy projects but nonetheless face restrictions accessing the financial system, especially credit.

We at CAF hope this latest contribution will play a useful role in building the yearned for economic and social development of our nations.

L. Enrique García
Executive President of CAF

Recognition

The production of this report is responsibility of the Vice-presidency of Development Strategies and Public Policies, under the general direction of Leonardo Villar, and the academic coordination of Pablo Sanguinetti.

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Access to financial services,
development and welfare

Access to financial services, development and welfare¹

INTRODUCTION

Why is access to financial services a potentially key factor to promoting economic development and welfare in Latin America? The first aspect to consider is that the mission of financial institutions is to capture domestic savings -and eventually savings from external sources- and finance both working capital (liquidity needs) and investment from firms (physical capital). Households also need credit for financing investments or spending needs (i.e. education or buying durable goods), whose timing does not always coincide with available income or savings. Aside from savings and credit services, the financial system offers insurance products, which are crucial to investment projects subject to events or fatalities that could negatively affect returns (for example, climate instability in the case of agricultural production). For family welfare, this means covering accidents or illnesses that may affect the head of the household or any other members. Finally, another important service from financial institutions revolves around facilitating economic transactions and payment methods.

Notwithstanding these different channels -through which the financial system can promote accumulation of physical and human capital, economic productivity and household welfare- the development of these markets has not always been as much of a priority as economies necessitate, especially developing economies. Different measures that attempt to describe the volume of financial intermediation and access to these services among families and firms demonstrate there are significant differences among these indicators between developed and developing economies. Moreover, in the specific case of Latin America, the difference -especially in access- is greater than what is expected due to the level of per capita GDP.

What are the reasons that explain the underdevelopment of these services? It bears noting that even in more developed nations, financial markets are subject to market failures due to externalities, problems stemming from incomplete information and inadequate incentives associated with the imperfect control and monitoring of debt and credit contracts. These market failures generate additional service costs, which, in the case of credit, translate into higher interest rates, less lending and shorter lending periods than socially optimal. In some cases, many potentially good clients cannot access these products or exclude themselves because of high costs or unfavorable conditions. These imperfections imply that in practice credit and other services are supplied in relation to the level of wealth or active liquidity which firms and households have available as collateral and, to a lesser extent, the profitability and financial viability of the projects during their period of execution and maturation.

Generally, the distinguishing feature of a poorly performing financial market is a significant margin between the cost of self-financing (internal financing) and seeking resources in the market (external financing), which leads to investment or spending decisions by firms and households that are contingent upon the availability of short-term cash rather than profitability or expected benefits from these investments or expenditures.

The purpose of this publication is to analyze in detail the role that financial access plays in the development process, especially in the case of Latin American countries. First, it emphasizes the fact that to understand the

¹ This chapter was written under the supervision of Pablo Sanguinetti.

role of finance in development it is important to complement traditional measures of depth with those that describe access to these services among the population and the economy's firms.

Finding appropriate tools to measure access and identify possible restrictions is a difficult task, among other reasons, because the use of services reflects aspects that affect both supply (e.g., quantity and geographic location of banking outlets) and demand (e.g., household income and the capacity to generate savings, or confidence in the financial system). In this case, the lack of bank accounts or credit, among others, does not necessarily reflect problems or restrictions to access among households and firms given that they could be voluntarily excluding themselves for reasons not related to the market's poor performance. However, considering the benefits these services could bring (saving time to make payments or providing financing for purchases, among others) it is difficult to conclude that a situation conducive to maximizing welfare and economic productivity can coexist alongside low-utilization levels of financial services.

The intent to measure access to these services is, then, an advance with respect to the traditional measures of financial depth that only capture the volume of intermediate resources (e.g., the private sector's total credit) as a percentage of GDP. Clearly, these measures do not demonstrate the degree to which the use of bank accounts or credits extends to households with different incomes or socioeconomic conditions. This significant gap in the use of services could directly reflect whether the financial system is solving problems due to incomplete information, incentives and externalities that could result in many firms and households with worthwhile projects not having access to financing.

The importance of strengthening access to financial services as a mechanism to boosting development and welfare has been highlighted in numerous studies (e.g., World Bank, 2008; IADB, 2005). This report follows along the same path and contributes to closing the gap that exists in the available information on different aspects of the use of financial services for a broader view of cities and countries in Latin America. To that end, the CAF 2010 survey included a module of questions on those different elements. The information from this survey confirms previous results and estimates that suggested a low level of access to financial services regionally.

For example, on average, 51% of the households from a sample of 17 cities² have an open account in some type of financial institution (including microfinance institutions). Access to credit is even scarcer: only 12.3% of households have requested and taken out a loan in one of these entities. These averages, however, obscure wide variations. For example, among the surveyed countries, Brazil and Uruguay appear as those with the greatest access to accounts and credit, while Argentina and the Bolivarian Republic of Venezuela show the biggest gaps, especially in terms of credit access. On the other hand, in Bolivia, which has very developed microfinance systems, the utilization of formal credit instruments is very high (above 80% of credit users), despite having the lowest per capita income among the case studies.

One element that is repeated in nearly all of the countries is that while access to financial services rises with household income level, the curve slope is not very steep; that is, the use of these services rises relatively little with income. This suggests that the problem of access covers a broad swath of the population, and is not just a problem of the poorest sectors in each country. Thus, for example, a large proportion of the middle and upper-middle (third-fifth or higher) class, in various cities, lack a banking account in the financial system. Regarding credit and the average of surveyed cities, having a loan rises from 8% of the poorest quintile to 22% in the

² Buenos Aires, Cordoba, La Paz, Santa Cruz, Rio de Janeiro, São Paulo, Bogota, Medellin, Quito, Guayaquil, Lima, Arequipa, Panama City, Caracas, Maracaibo, Montevideo and Salto.

richest quintile. These results indicate that the problems and obstacles households face in accessing financial services -especially the most sophisticated tools, such as credit- could, in part, be associated with problems of monitoring and fulfilling debt contracts or macroeconomic instability, which are factors common to the group of households (independent of their income level) and firms within a specific economy.

This publication also offers an updated analysis of microfinance in the region. As indicated previously, the data suggests that in the case of some countries, such as Bolivia (and Peru), the expansion of these microfinance institutions has been a very positive development, which has brought financial services to significant segments of the population and firms within the economy. Microfinance has advanced in the region, in part, because it has been able to solve some of the market failures that affect financial markets.

The “microcredit revolution” is based on the design of innovations to create creditworthy candidates among historically excluded individuals. The microfinance institutions (MFI) combine elements of the traditional bank with informal financial mechanisms and, to a certain extent, represent “a market” of immense demand ignored by the traditional financial system. Its relative flexibility, proximity to the client and large capacity for innovation has given it an advantage over the traditional bank to get closer to this segment and demonstrate that it can be lucrative. It is interesting that the Latin American model of microfinance, with its “pro-market” tendency (and less altruistic compared to the Asian model), has grown sustaining large portions of small credit, presumably aimed towards the poorest clients.

Despite notable growth in credit offered by MFI, dependence on informal sources (e.g., lenders) continues to dominate household and business financing. As will be discussed ahead, this may indicate that while MFI are relatively more flexible than traditional banks in tending to a sector with particular characteristics, its contracts still may seem relatively rigid compared to those offered by the informal sector.

Finally, the report analyzes different public policy initiatives to encourage access to financial services. There is room for interventions that solve failures and other imperfections that affect market functions. These interventions are framed within a new context characterized by the existence of more specialized instruments that directly attack identified problems or failures and which also strengthen complementary relationships with private banking. The public bank, especially the development bank, has played and can continue playing a significant role within the State in the implementation and management of these policies. However, elements of Corporate Governance, the clarity and focus of its mandate and its interaction with the overall regulatory framework are key to the bank’s proper functioning.

This publication develops these conclusions over the course of six chapters. The introductory chapter, apart from summarizing the analysis that is presented in more detail in the following chapters, expands arguments that link the development of financial services with economic growth and social welfare. Chapter 2 describes the recent evolution of financial systems in Latin America, including a description of existing evidence from secondary sources on indicators of financial depth and access to services. Chapter 3 analyzes in detail the issues of credit access for firms, particularly small- and medium- sized enterprises (SME), and discusses microeconomic evidence on restrictions to financial access and private and public initiatives to resolve these obstacles. Chapter 4 studies the development of regional microfinance, analyzing to what extent these institutions have brought credit and other financial services closer to microenterprises, the main source of employment and income in many Latin American economies. Chapter 5 analyzes access to financial services by households, using as its base the CAF 2010 survey. As was mentioned, this survey provides new evidence on a broad array

of financial instruments used in 17 Latin American cities. The chapter also describes intervention initiatives to encourage access to financial services among households and evidence on the impact these interventions have on different aspects of welfare. Finally, chapter 6 studies the role of public banking in the management of different initiatives to improve access to financial services and highlights how improving the institutionality of these entities can positively impact performance.

As previously indicated, one of the main contributions of this report is to offer new evidence about access to financial services in Latin America. However, why is the topic of greater development of the financial system leading to increased access relevant? The following section of the introductory chapter is dedicated to answering this question, highlighting its importance as a critical element in development policies. The following sections present a summary of various arguments that are developed in more detail in this report's later chapters. The third section describes a quantitative diagnostic on the situation in Latin America regarding the recent evolution of financial markets and access to services. The fourth section advances conceptual arguments, market failures and obstacles that could explain the region's lag. Finally, the last section describes intervention policies to expand the use of financial services and explores to what extent public banking, in tandem with private banking, can play a major role in managing these initiatives.

NEXUS BETWEEN FINANCE AND DEVELOPMENT

It is difficult to imagine an economy maintaining a sustained growth without the simultaneous development of a financial system that facilitates families' and firms' access to savings and credit services, insurance and payment methods. This section first describes conceptual arguments supporting the idea that strengthening the financial system can play a significant role in economic development, identifying the different channels (promoting savings, investment, productivity, among others) through which this process emerges. Secondly, it analyzes the existing empirical evidence on the nexus between finance and development. Special attention is given to evaluating the causal direction between both variables; thus, it becomes possible to identify which of the previously noted mechanisms is most relevant from the quantitative point of view.

Finance and development: conceptual aspects

Financial institutions play a fundamental role in capturing resources stemming from household savings, which are later allocated through credit to investment projects (including financing working capital) and initiatives both entrepreneurial (e.g., creating new firms with innovative technologies) and familial (e.g., investing in human capital, buying durable goods, among others). In this process of mobilizing savings to funnel them towards the best productive uses or facilitate household investments in human capital or other activities, banks and other financial intermediaries provide aggregated value through various mechanism (Levine, 2005), such as: i) using technologies that enable the cost of capturing deposits to fall; ii) generating information about new investment opportunities and entrepreneurial skills and/or good residential customers; iii) monitoring the execution of business and household investment; and iv) offering incentives so that these customers fulfill their projects and pay their credit commitments. It is worth noting that these activities would be very costly if they were undertaken separately by each depositor or investor.

The task of assigning credit should be realized, on principle, without regard to the wealth or value of the firm's or entrepreneur's current activities, focusing instead on the project's profitability and financial viability. This process stimulates investment in the most profitable activities, which not only results in an increase in the

economy's capital stock but also in the productivity of the resulting capital and its investments. Clearly, the more efficiently the financial system fulfills these functions, the greater its repercussions on the economy's aggregated rate of savings and the volume and productivity of investment. Both aspects tend to positively impact long-term growth and levels of national development.

Beyond savings and credit services, the financial system also enables the moderation of risk from unexpected events or lowers the probability that unforeseen hazards ruin firms' investment projects (e.g., climate problems and their impact on agricultural production; fires at productive establishments, among others) or significantly reduce household income (e.g., the death of the head of the household). The existence of these risks generates strong impacts on investment return or family income once they occur, but also affect *ex ante* the decisions of firms and households. The former could abandon executing investment projects that included these types of risks, while the latter could face costly decisions of self-insurance.

The types of insurance offered by financial entities permit the diversification of these risks by pooling a large group of customers through a premium that serves to cover the costs of a future event for a firm or household affected at a particular moment. To the extent that hazardous events do not simultaneously affect the households and firms that are covered, these risk-sharing schemes are economically sustainable. Beyond effects to the individual welfare of households and the productivity of specific investment projects, it is clear that the development of insurance services will also have aggregate consequences on economic growth. This will be true to the degree that these services promote savings and improve the allocation of investment.

In that sense, it is to be expected that investment projects with high returns, while higher risk, are now more appealing to depositors and investors, since some of the idiosyncratic risk is eliminated thanks to insurance mechanisms. The best risk-return combination may encourage savings while improving the allocation of investment resources in the economy, which will certainly have a positive influence on product and growth.

Finally, there is another service, also very relevant, that financial institutions offer and is associated with facilitating transactions or the economy's payment methods. Through different instruments (checking accounts, checks, debit cards, Internet payment, among others) these institutions reduce the costs of transactions to facilitate payments and collections that both firms and households make every day. These lower costs may result in more time for work, leisure activities or the accumulation of human capital.

For firms, this leads to savings in direct costs (e.g., workforce) by facilitating product sales or purchasing goods. Clearly, these cost savings will include savings in efficiency or productivity, which could impact the economy's long-term level of production and income.

The discussion heretofore suggests that financial development can positively impact economic development, both by stimulating savings and the accumulation of capital (physical and human) and by encouraging better resource allocation or production efficiencies. These impacts occur through credit and savings services, and insurance and payment methods.

Depth, access and evidence on the connection between finance and development

But conceptually, beyond identifying the various channels through which financial development can stimulate economic growth, what empirical evidence exists on the connection between financial development and

economic development? To what extent does the evidence shed light on which of the previously highlighted channels is more or less important on the dynamization of the growth process?

A critical step in the empirical work is related to measuring financial development. At what point can it be said that the financial system of one country is more developed than another? What are the indicators that should be used, and to what extent do these indicators capture the theoretical ideas previously discussed? Ideally, measuring financial development should reflect to what degree these institutions' activities resolve the problems of adverse selection, moral hazard and externalities that affect operations in these markets and may include bad credit allocation. In other words, it is interesting to consider in what measure is the financial system facilitating efficient economic resource allocation.

It would be beneficial then to seek variables or quality indicators for the systems' functioning rather than volume or quantity. Nonetheless, as will be demonstrated, the majority of the indicators used are quantitative, with the hope that there is a positive correlation between the scale of operations and a solution to the market failures mentioned before.

One of the indicators most used for measuring the development of financial systems is the so-called "depth indicator," which captures the volume of the system's intermediation through measures such as the total value of the assets of financial institutions in relation to the economy's GDP or, alternatively, the volume of the private sector's credit (both banking and those mediated through capital markets) also in proportion to GDP.

The left panel of Figure 1.1 shows the simple correlation of the last indicator with per capita GDP for a sample of 175 countries.³ The differences in financial depth between different economies (vertical axis) are significant. For example, while developed countries (like the United States, Canada, France or Great Britain) have intermediation levels above 150% of GDP, some poor countries in Africa do not reach 10%. In Latin America, there is also a significant lag (35% on average). The right panel of Figure 1.1 allows seeing in more detail the data for these countries, highlighting the wide variability in the interior of the region. For example, Argentina, Mexico, Paraguay and the Bolivarian Republic of Venezuela display depth values between 10% and 20% of GDP. Only Chile and Panama show levels of total credit to the private sector higher than 80%, which comes close to levels of developed nations and other emerging Asian economies such as Korea (97%), Malaysia (110%) and Thailand (103%).

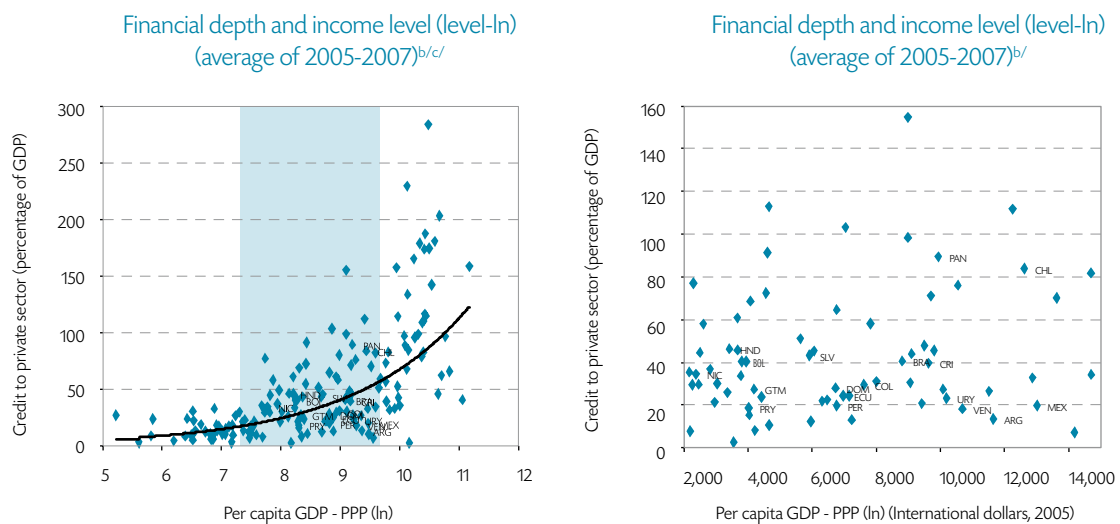
Figure 1.1 shows differences in the development of financial systems are positively and significantly correlated with the level of economic development, measured by per capita GDP, suggesting that financial development can play an important role in the long-term dynamic of this last variable. Moreover, the line of regression drawn on the figure (exponentially) indicates that the correlation between these variables is growing (it is greater for values higher than per capita income), possibly reflecting virtuous circles triggered between economic growth and financial development.

Nonetheless, there should be caution when suggesting a causal effect. On the one hand, the differences in economic development between the poorest and most developed countries are of such a significant magnitude (e.g., Mozambique's 750 dollars per capita *versus* Canada's 35 thousand dollars per capita) that it is difficult to believe that only one aspect, like the development of financial markets, can explain these differences.

³ Following standard practice, information on per capita GDP is presented in terms of the natural logarithm of this variable. This can lessen the effect of extreme observations (outliers) in the top part of the distribution (countries with very high per capita GDP). Perhaps more important is the fact that the differences in the logarithm of per capita income between countries fundamentally reflects differences in long-term growth rates, an aspect with which it would be interesting to relate to the greater or lesser degree of development in the financial system.

Secondly, the positive correlation does not in any way imply causality. There are many reasons to believe that differences in income caused by other factors (like natural resource availability, technological development, trade integration, among others) generate greater demand for financial services, so that the latter result from and accompany economic development, but do not constitute a factor that generates its own independent impact on the growth of economies.

Figure 1.1 Financial depth and income level (average of 2005-2007)^{a/}



a/ Includes domestic credit to the private sector: financial resources provided by the private sector, such as credits, purchase of securities other than shares, and other accounts receivable that establish the right to collect an amount of money.

b/ The values of both variables are the averages of the 2005-2007 period (the logarithm of the average in the case of the left panel).

c/ The exponential trendline in the left panel is equivalent to regressing both variables in logarithm.

Source: own calculations based in World Bank (2009).

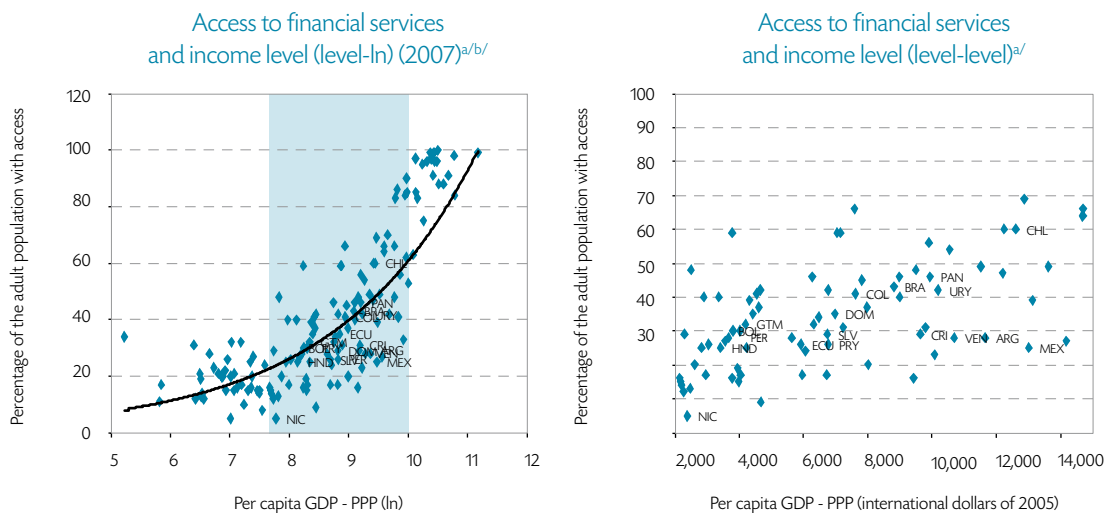
However, before detailing the evidence on causality, it would be useful to resume the discussion on measuring financial development. Particularly from the perspective of economic development, not only is the volume of intermediation that occurs through formal banking entities and capital markets important, but also the extent of different services towards households and firms potentially in need. This last aspect is linked to the notion of access to services that attempt to measure the financial system's coverage in terms of the number of firms and households in the economy that have these services.

The left panel of Figure 1.2 (see p. 20) shows the correlation between a basic access indicator, measured by the adult population that possesses some type of account in a financial body (vertical axis) and the logarithm of per capita GDP (horizontal axis) for a sample of 151 countries. This access indicator, estimated by Beck *et al.* (2007) was

created based on household surveys and other variables of national financial systems. There is a strong positive correlation between the average per capita income of economies and this other measurement of financial system development.

In addition to the degree of financial depth, a non-linear (exponential) relation between access and economic development is apparent, which again suggests a positive correlation between these two variables with the level of development.⁴ This partly explains the big differences in levels of access between rich and poor countries. For example, less than 10% of the population has access to an account in a group of African countries and a few in Latin America (including Nicaragua). This should be compared to values near 100% in countries of the Organization for Economic Cooperation and Development (OECD). As can be seen with greater precision in the right panel of Figure 1.2, the majority of the countries in the region display values between 25% and 35%. Chile stands apart from the rest with an indicator of 60%.

Figure 1.2 Access to financial services and income level (average of 2005-2007)



a/ The figures of per capita GDP are equal to the average of the 2005- 2007 period (the logarithm of the average in the case of the left panel) while the figures of access to financial services correspond to the year 2007.

b/ The exponential trendline in the left panel is equivalent to regressing both variables in logarithm.
Source: own calculations based in World Bank (2009).

Notwithstanding the strong positive correlation to income, Figure 1.2 also shows similar access levels may occur with very different per capita income. This is especially evident in Latin America. For example, a level of access at approximately 30% of the adult population places Bolivia, Guatemala and Honduras, whose per capita income is near four thousand dollars, together with Argentina, Mexico and the Bolivarian Republic of Venezuela, where per capita

⁴ The fact that the line of regression that best adjusts the relation between the level of access and the natural logarithm (ln) of per capita GDP is exponential implies that there is a linear relationship between the natural logarithm of access and the natural logarithm of per capita GDP. In chapter 2, different exercises comparing Latin America and the rest of the world, will take into account this ln-ln specification to evaluate if the region is behind in terms of access.

income almost triples that of the former group's. This clearly suggests that beyond the relationship between average per capita GDP and access, there are other factors (e.g., unequal income distribution, institutional and macroeconomic aspects) that are also key to determining the level of access to financial services.⁵

Is the development of financial systems a critical factor in economic growth?

Returning to the topic of causality, it is apparent that the simple and positive correlation observed between financial development and economic development (per capita income) ignores the effect of other variables that could be affected by long-term income levels. At the same time, there are justified suspicions that the effect is in the opposite direction, that is, greater economic growth caused by other factors, such as technological development, the discovery and the exploitation of natural resources or commercial integration, increases the demand for financial services without implying that the development of these markets serves a separate and determining function on long-term economic dynamics.

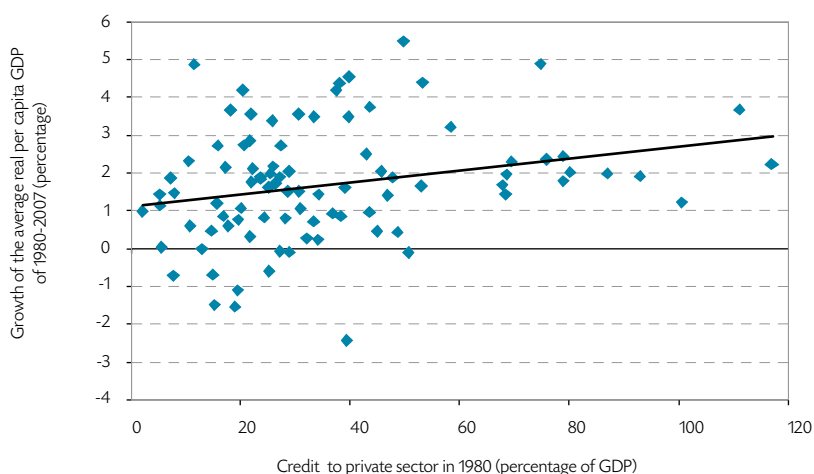
There is extensive literature by those that have tried to isolate the causal impact of finances on economic development. On the one hand, the most traditional literature uses the regressions approach with cross-sectional and temporal data at the level of countries to try to isolate the effect of financial development on growth. These works (e.g., King and Levine, 1993), whose main results are summarized in Box 1.1 (see p. 22), generally attempt to estimate the partial correlation between the rate of average long-term growth and an indicator of financial depth.⁶ To avoid problems of endogeneity or inverse causality, this last variable is generally measured at the start of the period. Figure 1.3 (see p. 22) shows an exercise of this type of simple correlation (not conditioned). In it, one can effectively see there is a positive and statistically significant correlation between the initial level of financial depth (measured in 1980) and the rate of average per capita GDP growth in the period of 1980-2007 for a sample of 175 countries.

This simple correlation analysis, while interesting and suggestive, poses multiple problems. On the one hand, economic growth depends on many other variables -such as human capital reserve, the trade regime, institutions, among others- whose impact can be isolated in order to identify the specific effect of the variables related to financial development. On the other hand, even when there are regressions that isolate the effect of these other variables, the problem of identifying causality persists. Even when the finance indicator is taken at its initial moment, it may be the case that the financial system that year incorporates expectations of future economic development, or that both variables are affected by previously existing tendencies that result in a spurious correlation between the two (e.g., an acceleration in the rate of technological change that spurs income growth for a prolonged period and simultaneously promotes higher demand for financial services.)

One way of dealing with this problem of endogeneity is to use the instrumental variable method. This method is applied in a series of recent works (Levine, 1998, 1999; and Levine *et al.*, 2000), whose main results are described in Box 1.1 (see p.22). These works are based on the idea that there are different exogenous factors (with respect to current income) in the degree of development of national financial systems. These differences are associated with the level of protection for creditor rights derived from each nation's

⁵ Low rates of depth and access observed in Argentina and Mexico suggest that recurring macroeconomic and banking crises in these nations may have a negative effect in weakening citizen confidence in the financial system and tightening conditions for granting credit and other services to families and firms.

⁶ As will be seen, the majority of works that attempt to empirically investigate the relationship between finance and economic growth use the depth indicator to measure development of financial markets in countries. This does not imply that the works do not consider the extent of access as relevant but rather that it is not available for a broad array of countries and years, which precludes producing estimates with a reasonable level of accuracy.

Figure 1.3 Financial depth in 1980 and per capita GDP growth (average of 1980-2007)

Source: own calculations based in World Bank (2009) and Beck and Demirgüç-Kunt (2009).

legal tradition -British, German or French- (being Great Britain's legislation the most pro-creditors and France's the most lax.)

These differences have direct implications on the development of financial institutions, since they affect debtors' incentives and creditors' capacity to fulfill and obligate the fulfillment, respectively, of a debt contract. Given that the majority of the countries adopted these legislations according to their colonial origins, it may be supposed that their impact on posterior financial development is exogenous with respect to variations in per capita GDP in more recent periods. Levine *et al.* (2000) find that this exogenous variation of the financial intermediation indicator is positive and highly related to the per capita GDP growth rate and that the estimated impacts are quantitatively important.

Box 1.1 Econometric studies with cross-sectional information and times series at the level of countries

Goldsmith (1969) is one of the first authors that attempts to empirically investigate the impact of financial development on economic growth. His work gathers information on 35 countries during a period of 1860-1963. The levels of financial development are measured with a traditional depth indicator that incorporates funds channeled both through the banking system and capital markets. The author shows that over time there is a positive correlation between financial intermediation (in proportion to GDP) and the level of economic activity for the majority of the sample nations. While the study refrains from explicitly offering a causal interpretation of this evidence, it at least shows that the development of a financial system is key to the long-term development process of economies.

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King and Levine (1993) attempt to resolve some of the problems that Goldsmith's work faces by expanding to 77 the number of countries under examination, although this results in reducing the time period under analysis, which now covers a period from 1960-1989. The authors attempt to correct for possible endogeneity problems (or simultaneity between financial and economic development), associating initial financial depth levels (in 1960) with the variables' previous growth. The results show a strong correlation (conditioned by the presence of other determinants) between financial depth and growth in per capita income, investment and increases in the economy's aggregated productivity. The estimated coefficients suggest significant impacts (with due precaution on the question of causality). For example, if Bolivia in 1960 would have increased its level of financial depth to the 10% observed that year to the average level of developed nations (23%), it later would have grown 0.4% more over the next 30 years and per capita GDP in 1990 would have been 13% greater.

Levine (1998 and 1999) and Levine *et al.* (2000) attempt to improve the estimates through a strategy for identifying the causal effect of financial development on growth, using the instrumental variables method. They propose legal origin (administrative and commercial rights) as an instrumental variable. As mentioned in the text, these differences have direct implications on the development of financial institutions. Levine *et al.* (2000) find that this exogenous variation of financial intermediation is positively and significantly related to the rate of per capita GDP growth. The estimates, using cross-sectional data from a sample of 71 countries during a period of 1960-1995, suggest, for example, that if Argentina had raised its credit indicator to the private sector above the average 16% GDP observed for the period of 1960-1995 to the mid-point of developed nations, (25%), its growth rate would have been 1% greater per year. This is a significant value given that this country grew at an average rate of 1.8% during that period of time.

Finally, Levine *et al.* (2000) and Beck *et al.* (2000) propose the methodology of panel estimation as an alternative that not only exploits the cross-sectional variation between countries but also those that occur over time for the same country with the intent of identifying the effect of financial development on growth. Among the advantages of this methodology is the fact that it allows the inclusion of fixed effects by country and, in this way, to control for whatever unseen specific factor that remains constant in time (availability of natural resources, political regime, cultural aspects, geographical variables, among others) and could affect the growth dynamic. The work of Levine *et al.* (2000) uses a sample of 77 countries for the period of 1960-1995. The data are grouped into non-overlapping periods of five years, which generates seven temporal observations for each country. The results of the estimates of these models reinforce previous findings from studies that use cross-sectional data, which suggest significant impact from financial development on growth dynamics. For example, in the case of Mexico, a rise in private credit above GDP from 22.9% (average of 1960-1995) to 27.5% (the mid-point of a sample of 77 countries) would have resulted in a growth rate of 0.4% per year.

Source: own elaboration.

The works described above represent an advance in the empirical study of the relationship between financial and economic development. However, as was noted, they confront the important challenge of solving the problem of causal identification. On the other hand, they do not permit inquiry into the different channels that the theoretical literature identifies upon relating the two variables. A new approach has recently emerged that takes another path towards the quantitative analysis of the relationship between financial and economic

development. This approach uses general equilibrium models as a base for performing simulation (calibration) exercises, where one can quantitatively evaluate the impact on an economy's aggregate long-term income and changes in levels of financial depth (Amaral and Quintin, 2010; Greenwood *et al.*, 2010; and Buera *et al.*, 2010).

These works, whose main results are summarized in Box 1.2, have the benefit of proposing exercises whose motivation is directly related to theory, which enables to clearly define the relevant channel under examination. Also, in the context of these simulations, quantification of these effects may clearly be interpreted as a causal effect.⁷ The main conclusion of these studies is that the largest portion of GDP growth-per-worker that is produced due to financial access occurs in increments in productivity as the result of better capital and human resource allocation throughout the economy's sectors and firms.⁸

Box 1.2 The simulations approach from general equilibrium models

Gine and Townsend (2004) and Jeong and Townsend (2007) were the first to suggest general equilibrium models and to apply them towards quantifying the relationship between finance and economic development, using information from Thailand. More recently, Amaral and Quintin (2010), Greenwood *et al.* (2010) and Buera *et al.* (2010) use this methodology to quantify the impact on income of long-term development of financial markets, managing data for a wide sample of countries.

In the Amaral and Quintin model (2010), individuals have the option of choosing to become business owners or workers. This depends on the level of entrepreneurial skill and wealth they possess. This last factor is relevant to the extent that there are restrictions to accessing credit for financing capital purchases needed for establishing a new firm. The model is calibrated to replicate the relevant characteristics of the United States in terms of distribution of the firms' sizes and the level of observed financial depth. The authors later investigate the effect of changes in capacity to fulfill debt contracts (costs of meeting financial contracts) on financial development and the economy's per capita income. The work shows that this type of market failure can have significant consequences on the economy's aggregate production. For example, a relatively low level of financial depth observed in Argentina in comparison to the United States explains to a large degree the differences between these two countries in GDP-per-worker.

Using a similar methodology, Greenwood *et al.* (2010) propose a model where financial entities must allocate resources both towards identifying firms with profitable projects, thereby representing potentially good clients, and, once credit is granted, towards monitoring activities aimed at ensuring debt obligations are met. The intermediation costs are reflected in the difference between the financial system's active and passive rates. Assuming that the firms are differentiated in terms of their *ex ante* returns, the existence of these intermediation costs produces a company size structure that is not optimum, since there are firms with growth potential that are underfinanced; while others, with low returns, are overfinanced. The authors initially calibrate the model to replicate the stylized facts of the United States economy in terms of distribution by company size and the value of rate differentials. Later, they ask up to what

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⁷ This is because the simulations consist in evaluating the model's results for variables of interest (e.g., per capita income, investment and productivity), when only the parameter associated with the level of financial development is modified and all the other possible determinants for long-term income (e.g., technological growth) remain constant, which is difficult to suppose when making estimates using information observed from the countries.

⁸ These results are consistent with the evidence presented in Hsieh and Klenow (2010), which finds that the biggest difference in output by worker between the United States, on the one hand, and China and India, on the other, stems from less productivity in the latter economies, the result of poor resource allocation between sectors and activities.

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point can the marginal differences between active and passive rates for a broad sample of countries explain the differences in development indicators. They find good replicability between the capital-product relation and the average size of productive units, though the model only explains 36% of the variability of per capita income observed in the data.

Finally, one recently published work, Buera *et al.* (2010), extends this methodology trying to define with more precision to what extent the development of financial systems impacts long-term development via increases in capital stock or through increases in average economic productivity. The authors explicitly introduce two sectors of the economy with distinct technologies in terms of fixed production costs. One of the sectors (manufacturing) has high fixed costs, so naturally its scale of production is higher than other sectors (services) where these costs are much lower.

The authors find that the model simulations replicated two-thirds of the correlation between financial depth and GDP per worker observed in the data. Moreover, most of the difference in GDP per worker, caused by changes in access to financing, is through productivity, and this impact is different across sectors. Lack of access to credit reduces by up to 50% productivity in the industrial sector, while falling less than 30% in services. Interestingly, the model allows to differentiate the effect on productivity, distinguishing between misallocation of capital (low-productivity firms receive as much credit as high-productivity firms) *versus* misallocation of entrepreneurial talent (talented but poor entrepreneurs have to delay their entry into business while rich but untalented entrepreneurs delay their exit). While in the service sector misallocation of capital caused by financial constraints accounts for almost 90% of the decline in productivity, in the industrial sector, the misallocation of human talent explains more than 50% of this indicator's decline.

Source: own elaboration.

Finally, there is a third set of empirical studies investigating the link between finance and development. These studies use microeconomic information at the level of industries or firms to analyze in greater detail some of the mechanisms through which financial development affects growth. These works, whose main results are summarized in Box 1.3, partly confirm some of the assumptions discussed previously regarding the fact that the development of financial systems tends to affect economic growth through increased economic productivity because of a better allocation of capital and labor between sectors and companies. In this context, Rajan and Zingales (1998) find that further development of the financial system, which tends to positively correlate with improvements in access, affects to a higher degree firms that belong to sectors that naturally demand credit due to their larger scale of production (such as manufacturing machinery and equipment). On the other hand, the most recent works of Beck *et al.* (2005) and Beck *et al.* (2008) show that financial development has a positive impact on firms' productivity and that this impact is more pronounced in small firms that face *a priori* greater restrictions accessing external financing.

Box 1.3 Evidence from studies using micro information at the level of industries and firms

One of the first works with this approach is Rajan and Zingales (1998). The authors argue that development of financial markets reduces the gap between internal and external financing, which drives the growth of already established firms and the emergence of new production units. This effect is heightened among industries that are naturally more intensive in their use of external financing for technological reasons. Using data from 36

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countries and 42 industries, their work gauges to what extent increases in the level of financial depth among nations are associated with higher growth in aggregate value (or in the number of firms) in industries that according to the standards of the United States (assuming it is an economy with low levels of financial friction) are financially intensive. The authors find results that confirm this hypothesis.

Beck *et al.* (2008) emphasize another channel through which the development of financial systems may affect growth: abolishing restrictions that allow small firms to obtain financing and can therefore expand production. Following a methodology similar to Rajan and Zingales (1998), these authors examine whether industries that consist of small-sized firms grow more rapidly in countries with greater financial development. Once again, they use the United States to define industries that have a high proportion of small firms, which is mostly determined by technological reasons, since this economy would not be significantly affected by financial disruptions. Making estimates that use data by country and industry, the authors find that industries consisting of small firms grow at a higher rate in countries with higher financial development. These results are consistent with the idea that small firms encounter more difficulties obtaining financing and could benefit the most from developing these markets.

Beck *et al.* (2005) use information at the level of firms to examine whether greater access to financing results in greater production, and whether this effect is more important for small firms. They use a database of four thousand firms in 54 countries. In one of the proposed exercises, they consider the effect of obstacles to financing on sales growth, measured by a qualitative subjective indicator indicated by the same firms. The observations effectively suggest that difficulties accessing credit reduce sales growth perspectives. The value of the estimated coefficient indicates that the existence of these restrictions reduces the rate of revenue growth by approximately 9%. The authors also discover that this effect is more significant in the case of smaller firms.

Taking advantage of the fact that the information presents a variation in characteristics across the sample of countries, the authors measure whether the impact of financial obstacles is lower in countries with more developed financial systems (greater financial depth). The results confirm this hypothesis and further suggest that reducing the impact caused by obstacles to credit on sales growth, derived from the development of financial markets, is more significant in the case of small firms. Particularly, a rise in a country's level of financial depth raises sales of small firms approximately another 9%, while there is no impact on large firms.

Source: own elaboration.

Based on the previous analysis of the connection between finance and economic development, it can be concluded that there are different methodologies that suggest the development of financial markets could be positively correlated with long-term economic growth. This correlation could reflect a causal effect, where improvements to credit access and other financial services lead to greater production and income. Interestingly, both the analysis stemming from theoretical models calibrated to the different countries and studies using data from firms and industries suggest that some of the positive effect may result in economic productivity growth due to the reallocation of capital (and also human talent) towards firms or economic activities with worthy projects but with access restrictions (such as the case of small firms).

WHERE IS LATIN AMERICA REGARDING DEVELOPMENT OF ITS FINANCIAL MARKETS?

The analysis presented in the previous section showed that improving the financial system can play a significant role in economic development by promoting savings, the accumulation of physical and human capital, and productivity through better resource allocation throughout the economy. Therefore, in this context, it is important to consider the status of Latin America in terms of its financial institutions, and to what extent are these institutions fulfilling their role in promoting growth through the different identified channels.

Figures 1.1 and 1.2 (see pp. 19 and 20, respectively), shown above, already suggest that Latin American nations reflect, on average, a low level of development in financial systems in terms of both depth and access. In that sense, a large number of its regional economies are below the line that summarizes the observed trend between financial development and per capita GDP for the sample as a whole. This would indicate that average levels for Latin America (35% corresponding to financial intermediation and 32% to access) are below expected values given the per capita GDP of these nations. As reference, depth indicators for OECD and emerging Asian nations are at 125% and 70%, respectively, and 90% and 60% for access.

Chapter 2 compares in much greater detail a number of financial development indicators between Latin America and the rest of the world, including variables of intermediation and depth, information on capital markets (exchanges and stocks, public bonds and private holdings) and the banking sector. Measuring access, data is presented from the level of firms on the use of credit as well as information from surveys on household bankarization.

The analysis of recent trends illustrates that despite the last decade's advances in depth and access, regional financial systems continue to be poorly developed throughout most of its dimensions. This tendency emerges not only when the region's financial systems are compared to those of developed economies but also with the emerging economies of Asia and Europe.

Regarding capital markets, equity markets have little liquidity and continue serving the financing needs of only a few markets. In this sense, the recent growth of stock exchanges is related to the rise in valuations and not in the volume of stocks. Domestic bond markets provide financing to the sovereign sector and, to a much less extent, the corporate sector. In this context, banking systems continue to dominate the region's financial panorama. Nonetheless, despite the advances of the last five years, the level of banking intermediation has barely emerged from the relative stagnation of the last two decades.

Poor performance in terms of depth also corresponds to low access. While firms can access a wide array of payment services, the use of credit is limited. Households, for their part, register lower use of deposit accounts than other emerging economies and even lower levels of access to lending. Though the problem of access is generalized to the region, not every household and firm is equally affected. Both small firms and families with less resources tend to have more difficulties accessing banking services, especially credit, than large firms and rich households.

One aspect investigated in detail in Chapter 2 relates to the high cost of access services, which can act as a barrier to access. For example, the minimum cost of opening a deposit account represents more than 5% of per capita GDP in Latin America. Likewise, keeping the deposit account open, on average, costs close to 2% of per capita GDP. Only Sub-Saharan Africa has higher costs. Moreover, if you consider the income of the lowest population strata, the relation between the cost of services and income becomes even more unequal. On average, in OECD countries the minimum cost of opening a checking account represents less than 1% of average per capita income for the lowest

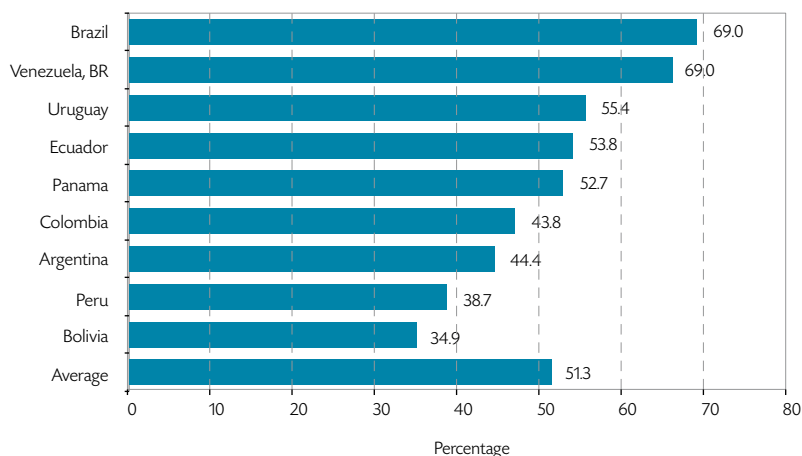
quintile. Meanwhile, Latin America's costs are higher even for the highest-income levels. In the case of the lowest quintile, the cost is equal to more than 30% of average income, which is practically prohibitive.

The analysis suggests that in Latin America access to financial services is highly unequal across the different income levels. There is scant evidence on the topic and what little exists is the result of household surveys in some countries that in some years incorporated questions about access to financial services. Evidence from secondary sources described in Chapter 2 show that the lowest income quintiles have very restricted access, compared to the highest. For example, of Colombia's poorest 10%, only 20% are bankarized (having some type of account), while 75% of the population corresponding to the richest 10% access such services. In any event, looking beyond populations at the distribution extremes, this evidence also suggests vast sectors of the middle class in many countries of the region also lack accounts in a financial entity.

Household bankarization indicators: the CAF survey

In order to provide more precise information about access to financial services that can be compared between nations, CAF included in its 2010 survey about access and quality of public services and infrastructure a series of questions on the use of financial services. The survey was carried out in 17 cities of the region and its results are described in greater detail in Chapter 5. Figure 1.4 shows the values obtained, which were derived from averaging (using the population as weight) the numbers for two cities surveyed in each country. In Panama, only Panama City was used.

Figure 1.4 Percentage of respondents who possess at least one bank account in selected countries of Latin America



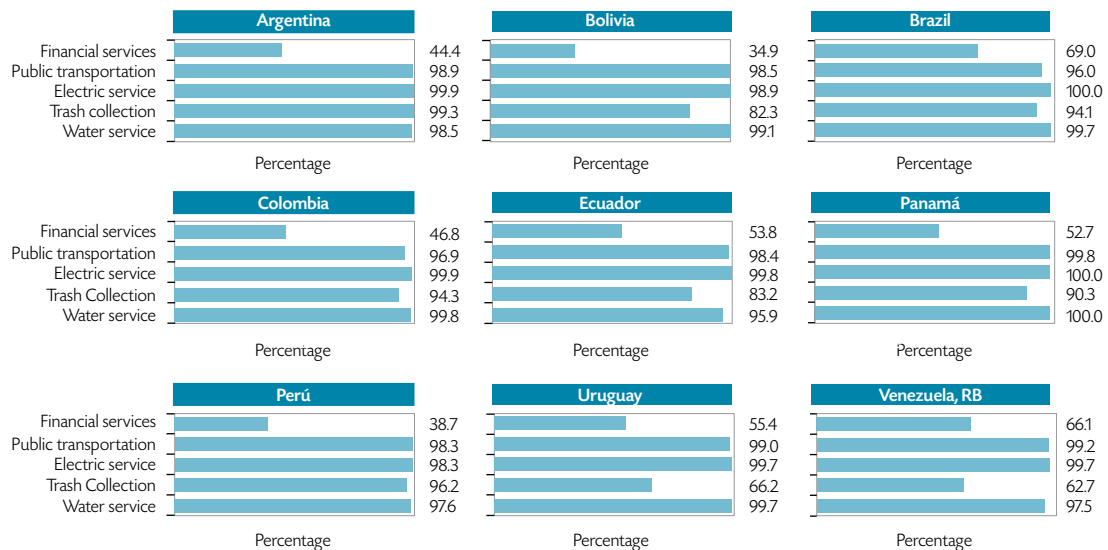
Source: CAF (2010).

The basic indicator of bankarization (holding an account) is, on average, 51% for the year 2010 for the group of cities included in the survey. This value is a little higher than reported by Beck *et al.* (2007) of 38% in 2007. Beyond the difference in year, it should be noted that the value emerging from CAF's survey covers a smaller number of countries and, more importantly, only captures access in urban areas, in many cases including the two major cities of each country. This clearly implies that the estimate shown in Figure 1.4 can be considered the highest limit that the value could reach with national representation.

The level of access to financial services is clearly low when compared with that of other public infrastructure services within the same cities. Figure 1.5 shows a significant lag in access to financial services, even in countries in whose most important urban centers there is a high degree of access to services providing drinking water, transportation, electricity and garbage collection.

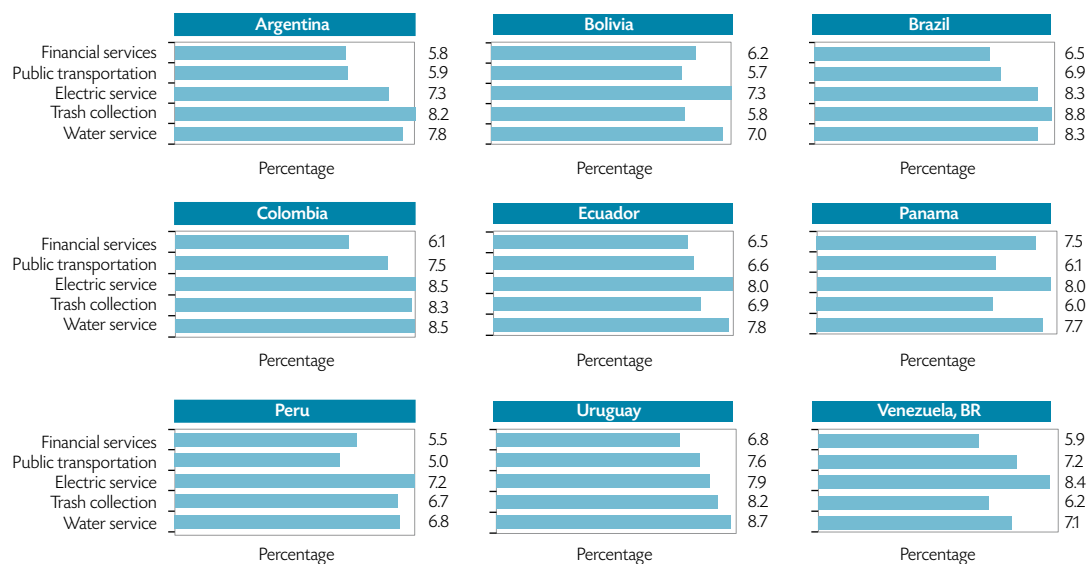
This difference between access to financial services and other public services is also reflected in the satisfaction reported by the population regarding the quality of these services. As seen in Figure 1.6 (see p. 30), in the majority of countries, satisfaction regarding access to an account or other financial services is less than that reported for other public services. These comparisons suggest that expanding access to financial systems faces challenges that to an important degree are particular to the sector, given that its improvement is not necessarily correlated with improvements in public and private capacities that are behind the advance in other infrastructure services.

Figure 1.5 Access to different services in selected countries of Latin America (percentage of respondents)



Source: CAF (2010).

Figure 1.6 Satisfaction with different services in selected countries of Latin America (1 represents the lowest assessment, 10 the highest)



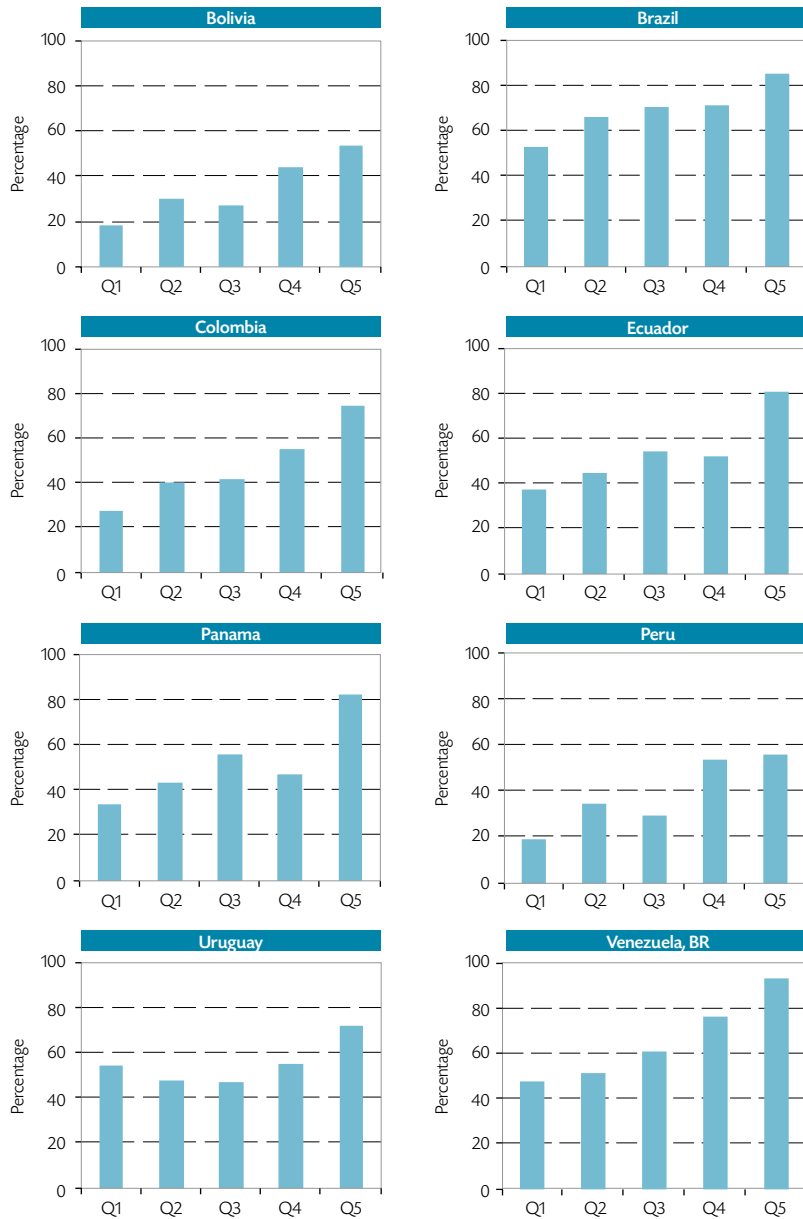
Source: CAF (2010).

Returning to the analysis of bankarization levels by income levels, as will be seen in Chapter 5, the information gathered by the CAF survey at the household level effectively suggests there is a positive relationship between income and access to financial services. This positive relationship may be seen in the data shown in Figure 1.7, which describes deposit holdings by income quintiles. However, the figure also shows that the lack of access is not exclusive to the poorest population of each country. As can be seen, in various economies, between 40% and 60% of the population making up the third and fourth richest quintiles (the middle and upper-middle classes) lack access to basic services.

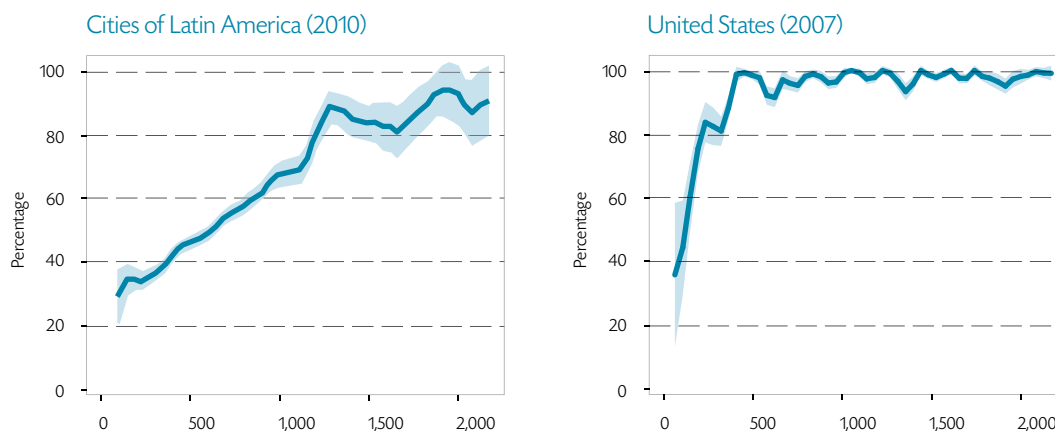
This evidence suggests that the underutilization of financial instruments is not just a problem of low-income levels. The information presented in Figure 1.8 (see p. 32) more clearly illustrates this point. The left panel shows the relationship between access and the level of monthly average income reported in the survey, expressed in dollars adjusted for purchase parity (i.e. internationally comparable) for the group of sample countries included in the survey. In the right panel, the same information for the United States is presented with the aim of making a comparison with a developed nation. Clearly, both panels verify that the level of access rises with reported income. However, for the case of Latin America, the curve slope is less steep (access rises more slowly with the rise of income), while it is very steep in the United States, indicating that in the latter economy there are no major differences in access by income level (only the very poor lack of access to accounts.)

However, perhaps most interesting is that access is very different for similar levels of income in Latin America and the United States. For example, while in the United States' families with monthly incomes equal to a thousand dollars are almost 100% bankarized (they have an account open in the financial system), in Latin America the figure is only a little more than 60%. However, this estimated average value for Latin America obscures a high degree of heterogeneity within the region. As will be seen in more detail in Chapter 5, with a monthly declared income of just less than

Figure 1.7 Access to bank account by income quintile in selected countries of Latin America



Source: CAF (2010).

Figure 1.8 Fraction of the population with bank account by monthly income level (USD)^{a/}

a/ Income is expressed in dollars adjusted for purchasing power parity (PPP). Monthly income above 2,200 dollars is excluded.
Source: CAF(2010) y Federal Reserve Board (2007).

one thousand dollars, in Brazil, Ecuador or Uruguay access is estimated around 80%; while in Argentina, Bolivia, Panama and Peru it is slightly below 60%; and in Colombia and the Bolivarian Republic of Venezuela, somewhere in between. Argentina is also an interesting case, where among incomes higher than two thousand dollars, and even up to almost four thousand dollars, the level of access is stagnant around 80%. This evidence directly suggests that while income is an important determinant of access to financial services, there are clearly country-specific circumstances, linked to regulatory environment, public policy, macroeconomic balances and other factors, which greatly affect access to financial services.

Often, having an account at an institution is the first step towards broader financial inclusion, ranging from conventional or programmed savings instruments to lines of credit for consumption or production activity. CAF's survey also inquires into household access to financial services such as savings and credit. Despite the fact that a small fraction of the population has an account in a financial institution, the results of the survey show that more than 63% of households report generating some type of savings. Less than 40% of those households do so through the financial system, while more than 80% say they use some type of alternative mechanism, such as cash, durable goods or informal savings arrangements.⁹ The coexistence of formal and informal savings instruments is undeniable and shows there is room to increase the formalization of savings in the region for all income strata but especially for the lowest.

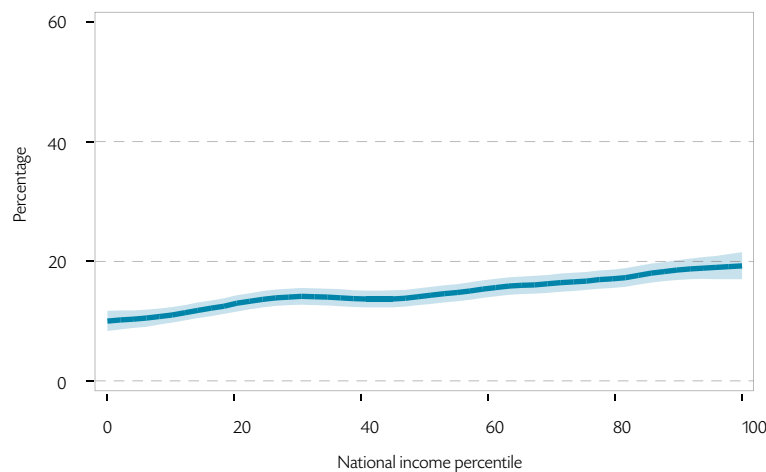
⁹ The question on use of formal savings mechanisms (within the financial system) and other alternatives allowed multiple responses, so naturally many families indicated they use both types of instruments.

Contrasting with the high percentages of savings generation (formal and informal) among the population, the survey found scant use of the financial system's credit tools, even though in this case there is an apparent coexistence between formal and informal credit. The CAF survey indicates that on average barely 19% of those interviewed claim to have existing credit. The primary source of financing is the financial system (for 65% of those who have credit), but the presence of other formal types (government credit, employer-based, trading houses and NGOs) and informal types stand out. In the case of the latter, the survey shows that a significant fraction of households (21% of those who have credit) reports receiving financing from family and friends, lenders and pawnshops.

In countries with significantly developed microfinance systems, such as Bolivia, the use of formal credit channels (banks, microfinance, cooperatives, among others), is very significant (above 80% of credit users), despite being the country with the lowest per capita income among those analyzed. Other countries such as Brazil and Uruguay also have very high levels of formal credit utilization (with the total of loans taken by households) in comparison to the region's average; on the other hand, the Bolivarian Republic of Venezuela, with relatively high per capita income, shows very low utilization of credit services from the financial system.

As expected, access to credit from formal financial institution rises with family income level but, as shown in Figure 1.9, the curve slope is not steep. For the average of surveyed cities, credit access among the lowest income levels is just under 10%, while it rises to just over 20% for the richest families.

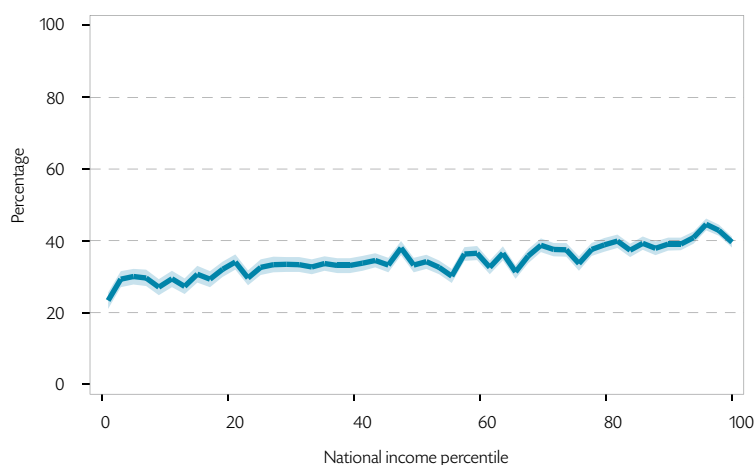
Figure 1.9 Use of formal credit instruments in the national income distribution



Source: CAF (2010).

It is interesting to note this behavior is also observed in other countries of the region that were not included in the CAF 2010 survey. Figure 1.10 shows information on credit status for adults ages 25-65 in Chile. This information is based on the CASEN¹⁰ survey, carried out in Chile in 2009, covering 73,000 households and with national representation. In this case, the average level of access and credit (near 30%) is greater than that observed in cities in the CAF 2010 survey, and is consistent with the fact that for the majority of access and depth indicators, Chile is located above the rest of the region. As can be seen, however, the level of credit access is higher over the income distribution but is not very pronounced. While the lowest decile of credit shows penetration of just over 20%, this value increases slightly above 40% in the top decile. It is again concluded that the lack of access to financial services in the region, in this case credit, is not limited to the poorest families but also observed in vast sectors of the middle and upper-middle class in various countries.

Figure 1.10 Tenure of a credit in the financial system in Chile (2009)^{a/}



a/ People between 25 and 65 years old.
Source: MIDEPLAN (2010).

Insurance is another important service offered by financial institutions that the CAF 2010 survey examines. The gathered data demonstrated there is a low level of insurance among the region's population. Just 45.8% of urban households claim to have public medical insurance and 27.1% private, which probably represents an upper limit on national insurance since coverage in rural areas is probably even less.

The risk structure perceived by the population closely corresponds with their decisions over insurance; medical insurance is the preferred among households, which dovetails with their perceptions of illness, accidents and theft (as a situation that threatens physical safety) as the most serious risks. However, it is clear that the overall level of insurance among the population, especially against risks related to health and employment status (but also against property, which is still important for lower-income groups) is extremely low.

¹⁰ National Socio-Economic Characterization Survey, Chile's Ministry of Planning (<http://www.mideplan.cl/casen>).

However, this analysis, which shows major deficits in household access to different services in a group of Latin American cities, is not sufficient to conclude there is a problem with access. It is also necessary to demonstrate that this low utilization of financial instruments has negative consequences on the national welfare of families and communities. To illustrate this, the lack of access to credit and savings instruments may affect incentives for families to save and result in negative consequence by not being able to promptly stabilize abrupt changes (expected or unexpected) in income or spending needs (e.g., durable goods). Chapter 5 offers evidence on this theme by presenting a case in which credit restrictions were relaxed for a very large group of low-income cardholders in Argentina and how this improved their ability to stabilize consumption over time (Ardissone *et al.*, 2010). On the other hand, access to credit can be relevant towards accumulating human capital. In this context, Chapter 5 also describes the results of a study carried out for this report (Solis, 2010), in which a public program extending educational credits to Chilean youths made a significant impact on the objective population's probability of completing their university studies.

Firms' access to financial services

In order to evaluate how much Latin American firms have benefitted from the development of financial systems, it is necessary to know why they use these services. First, the different uses of payment methods to facilitate transactions is notable. According to data from the World Bank's Enterprise Survey (ES), more than 90% of the businesses surveyed in the region report having a deposit account, which compares favorably with other emerging economies. Likewise, the differences between countries are not so pronounced (except in the case of Mexico, where low-utilization levels of these types of accounts are reported). Nor are there appreciable differences in the use of deposit accounts by business size, though generally smaller firms tend to report using these types of payment instruments less.

These results suggest that formal businesses in Latin America do not appear to have problems with access, at least to one type of financial service, such as deposit accounts. However, the ES results also indicate that access to other services, primarily credit, is less widespread. In this sense, a third or more companies consider the lack of credit one of the most important obstacles to business development. In Brazil, for example, more than half of the companies surveyed identify this problem. When the responses are broken down by company size, it is interesting to note that small and medium-sized enterprises identify the problem of credit access more frequently than larger firms do. In most of the economies, the incidence of problems of access to finance among SMEs is more than double the values found among large enterprises.

A more direct and perhaps objective way to measure credit access is to investigate whether the firm has a line of credit or loan with some type of financial institution. As shown in Table 1.1 (see p. 36) for the average of Latin American countries, the ES surveys indicate that 47% of the businesses had some type of existing loan in 2007 with the financial sector. Information by company size shows that, in all of the countries, SMEs with access to credit and existing loans represent a substantially smaller portion of companies than the large firms (39% *versus* 68%). Comparison with other regions show that Latin America is at a similar level to the emerging economies of Asia and Eastern Europe.

However, this average value for businesses with credit in Latin America obscures high variability. As shown in Chapter 3, Mexico is the nation with the least financial depth (only 11% of those surveyed say they have existing credit transactions) while Chile, Brazil and Peru are the countries with the highest credit development according to this indicator (65%, 69%, and 70%, respectively). Bolivia, Colombia, Ecuador and Panama follow with values between 50% and 56%.

Table 1.1 Percentage of businesses with credit line or credit in a financial institution

Region	Enterprises			
	Average	Small	Medium	Large
Emerging Asia	46	37	50	62
Sub-Saharan Africa	23	17	34	48
Emerging Europe	47	40	56	67
Latin America	47	39	54	68
Middle East and North Africa	28	19	32	46

Source: World Bank (2010).

The fact that many companies, especially SMEs, do not use loans or credit to finance their operations could be a consequence of their requests being rejected, thus being a direct indicator of lack of access. However, it could also be that the firms do not seek loans. The firms might be opting out of credit markets anticipating unfavorable terms or rejection. In these circumstances, the fact that these firms do not approach financial institutions seeking financing does not indicate their lack of need. Thus, it cannot be surmised that they do not face credit constraints. Evidence from ES shows that the decision to opt out of credit markets is widespread among Latin American companies. Among them, 56.5% say they have not requested a loan in the last year. This value rises to 65% for small companies (up to 20 employees) and falls to 42% among large companies. Among the countries under consideration, Mexico and Uruguay have the largest proportion of small companies that do not request loans (88% and 80%, respectively) while Peru and Chile have the lowest values (41% and 50%, respectively).

The reasons firms offer (particularly SMEs) for not requesting loans seem to confirm the hypothesis that they expect unfavorable conditions, citing problems related to credit access such as complex application rules, high interest rates, high collateral requirements and the belief that their loans will not be approved.

The conclusion that characteristics not necessarily related to profitability and productivity are important determinants in credit use can be seen in an Argentine case study, created especially for this report by De Giovanni and Pasquini (2010). The authors' results, which are presented in greater detail in Chapter 3, suggest that size and debt level are relevant variables when applying for a loan and whether banks approve the request.

Similar to the case of households, a low level of access among firms to credit instruments does not necessarily signify there is an access problem. For that, it must be shown that lack of access is distorting company decisions, causing social losses, for example, in terms of creating income or productivity through a lower rate of investment and productive innovation.

One way to provide evidence of distortions caused by the lack of access to credit among companies, especially SMEs, is to document that investment decisions partly depend on the availability of internal resources. In other words, these difficulties and higher external financing costs may negate the hypothesis proposed in

the “Modigliani-Miller theorem” (Modigliani and Miller, 1958) on the indeterminacy of the capital financing structure of firms (bonds, stocks, retained earnings, etc.) According to this hypothesis, the only relevant factor that should affect investment decisions is its profitability, in the sense that the expected net present value of the project is positive (or the project’s expected rate of return exceeds the opportunity cost of funds). In a context where external funding has additional costs and restrictions in comparison to using internal resources, investment decisions will depend to a significant extent on cash flow availability.

This raises a very simple empirical test for the existence of credit constraints and their impact on firms’ decisions, which consists of introducing variables associated with the availability of internal company funds (cash flow) in the equations that estimate determinants of investment and measure whether these variables are relevant to explaining these decisions. The conclusions presented in the work of Arbeláez *et al.*, 2010, summarized in Chapter 3, suggest that in the case of Colombia cash flow is significantly related to investment, even when controlling for sales volume (which serves to control for production shocks). Moreover, the results also demonstrate that the correlation is higher for small companies and is exacerbated during periods of low credit availability in the economy, which tend to be associated with recessions.

The problem of credit access among formal enterprises, described above, may be magnified in the case of microenterprises, productive establishments that are generally operated by low-income families, with very few employees and who work mostly in the informal economy. Chapter 4 presents an exhaustive diagnostic of the region’s microenterprise sector and the problems that these production units have faced upon trying to access credit markets. It also analyzes the extent to which microfinance institutions, which have emerged since the late seventies, have been able to resolve some of these problems.

Microenterprise activity was also an object of study in the CAF survey. According to the survey, almost 25% of the families earned their biggest income from microenterprise activity. The highest values, around 30%, were found in cities in Argentina, Bolivia, Peru and the Bolivarian Republic of Venezuela. The same survey shows a low level of formal credit sources among the microenterprise families. In effect, the simple average suggests that barely 14% of these families have an existing credit contract with a formal financial institution. It is worth noting that this survey is limited to urban zones and that the use of formal financing is even less in rural zones.

Microfinance institutions (MFI) combine elements of the traditional bank with lessons from informal financial mechanisms and to a certain extent represent a “market” response to the immense demand unmet by the traditional financial system. MFI’s relative flexibility, proximity to the client and capacity for innovation gives them an initial advantage over the traditional bank in getting close to this segment and demonstrating that it is a potentially lucrative segment. The “microcredit revolution” is based on crafting innovations that make reliable credit candidates out of individuals that have been historically excluded. It represents a paradigm shift in the business of providing financial services and its strategies are intended to reduce -or better yet, delegate- monitoring and adequately manage debtor incentives. It is interesting to note that the Latin American microfinance model is more pro-market when compared to the Asian model. This orientation has enabled high growth rates and self-sustainability from the financial perspective and has maintained important levels of credit aimed at poorer clients.

However, despite the remarkable growth of credit supply that MFI have provided to microenterprises, dependence on informal sources (such as lenders) continues to prevail. This merits particular attention given the high interest rates associated with these sources. There is a strong differentiation between the characteristics

of credit contracts from formal and informal sources, which suggests that the sources are not perfect substitutes, thus explaining their coexistence. A clear example of differentiation is flexibility in terms of repayment. In other words, while the MFI show a degree of flexibility compared to the traditional banking sector in serving a very particular sector, their contracts may still seem relatively rigid compared to those offered by the informal sector.

Finally, in the case of microenterprises there is also evidence showing that lack of access to financial instruments, especially credit, could lead to social costs and loss of welfare. On the one hand, there are studies that offer support to the hypothesis of high capital returns for small enterprises (Mckenzie and Woodruff, 2006; de Mel *et al.*, 2008). On the other, a work produced for this report (see Álvarez and Meléndez, 2010) and whose most important conclusions are developed in Chapter 4, shows that the expansion of this type of microcredit has resulted in greater productivity for microenterprises (sales per employee) and the companies' level of fixed assets (capital).

To summarize, the evidence presented throughout this section concludes that in Latin America families and businesses have limited access to financial services, whether the most basic (bank accounts) or those that are more sophisticated and require more client information (credit and insurance). At the aggregate level, this cannot be accounted for only by the relatively low levels of per capita GDP in the region. In the same vein, micro survey information shows that among the same level of household income or size of companies in different economies, there are different levels of access. Additionally, it was shown that the low utilization of financial instruments would cause social losses that could affect household welfare and distort firms' production and investment decisions. This suggests there are market failures that may be causing inefficiencies and restrictions to access. Next, those obstacles are analyzed.

WHAT ARE THE MAIN OBSTACLES TO THE DEVELOPMENT OF FINANCIAL SYSTEMS?

The previous section documented the lack of access to financial systems among families and businesses in Latin America. What is the nature of the market failures that result in this type of inefficiency? It is important to conceptually understand the origins of these distortions in order to correctly shape public and private interventions as solutions. Ahead, the conceptual arguments are summarized explaining market failures in the financial system. Intervention policies will be developed in the next section.

Market failures in the financial system

The financial system is subject to market failures that generate inefficiencies in credit allocation to firms and families and access to other financial services. In the case of firms, the existence of these inefficiencies is apparent in the wide margin between the cost of external and internal financing; in the fact that loans are given on the basis of observable characteristics, such as size, active liquidity, collateral and short-term cash flow rather than the expected profit of the investment project. Moreover, anticipating unfavorable conditions or denials of their request, many firms in the region opt against applying for loans or other credit instruments. In the case of families lacking access to financial instruments -such as transactional accounts-, they must shoulder higher costs (time, security) due to their lack of adequate payment systems. Likewise, the lack of access to savings, credit and insurance instruments affect incentives to save, all the while generating negative consequences by not paving over time the mismatch between cash flow and spending decisions (e.g., buying durable goods).

Chapter 3 presents in detail theoretical arguments explaining financial market malfunctions, especially those related to credit. While the discussion developed there emphasizes firms, the arguments also similarly apply to families. There are three market failures that distort the functioning of financial markets: adverse selection, incentive problems or moral risk and externalities.

Adverse Selection

One oft-mentioned explanation for malfunctioning credit markets is the problem of adverse selection, which results when there is incomplete information (or asymmetric information) on potential borrowers. The argument is based on the assumption that business owners and managers or families have complete information on the value of their enterprises, the quality of their investment projects or the capacity to generate income and their decision to honor commitments, while the potential lenders or external investors (banks, insurers and other capital market investors) only know this information imperfectly. In these circumstances, these external investors will value the firm and investment project, or the particular borrower, in terms of market averages, imposing conditions of interest rates and timelines that discriminate against the most valuable projects or firms (above the average) or against the most compliant borrowers. In other words, if these firms or families require credit, they will pay higher rates or be given less favorable terms rather than if having complete information.

In these circumstances, the interest rate could rise and the size of the loan could fall (Jaffe and Russel, 1976). This may imply that firms with good projects or families with ideas and the capacity to repay their debts choose to withdraw from the market (not request a loan), especially if they have their own means of financing investment or expenditures, since they would be unwilling to accept unfavorable loan conditions within the context of projects or spending plans that according to their own information (which they are unable to credibly or reliably transmit to investors), are very profitable and economically sustainable.

Stiglitz and Weiss (1981) use this argument to show that under these circumstances an “equilibrium with rationing” could arise in the credit market due to what is referred to as “adverse selection”. Given the problem of asymmetrical information, banks and other lenders cannot use interest rates as an instrument for discerning between good and bad borrowers.

As previously mentioned, when interest rates rise, firms with good projects or families with the capacity and willingness to pay flee the market (which occurs to a lesser degree in the case of less trustworthy clients), increasing the risk of debt default and reducing potential profitability for lenders. Consequently, the latter may decide to not substantially raise the interest rate, generating an excess of credit demand. In these circumstances, banks’ decisions to allocate loans will no longer depend on the characteristics of the investment projects nor expected income nor household payment decisions (traits that are not totally verifiable) but rather on other variables, like the capacity of firms and families seeking loans to provide backing through guarantees, net equity, short-term cash flow, among others (Fazzari *et al.*, 1988; Calomiris and Hubbard, 1988; and Bernanke and Gertler, 1987).

Incentive or moral hazard problems

Another theoretical argument that could explain credit market malfunctions is what the literature refers to as ‘incentive or moral hazard problems.’ This refers to actions that families or firms seeking loans may take that

act against the interest of lenders or external investors. The lack of information results in creditors who do not know and/or cannot verify the decisions of borrowers. At the same time, there are limits against banks and lenders executing contracts in the case of default; which is to say, there could be regulations that limit the liability of business owners or managers or heads of households. Alternatively, regulations might not limit the ability to exercise a debt contract to force payment of a loan, but institutional judicial weaknesses could, in practice, restrict this right. In either case, these factors create incentives so that firms choose riskier projects (they are more profitable for the firm because the losses are contained), or that families choose not to work as hard to generate income to pay off their debt. As can be seen, this implies a moral hazard problem against the creditor's interests, which affects the bank's or lender's expected profitability.

In this case, like the adverse selection problem, raising interest rates to offset the increased risk of default and the loan's decreased profitability may not always be the best solution, if this brings an increase to investment risk or adversely affects incentives for families to pay off their debts. It may be the case that the consequence of higher risk greatly offsets the rise in interest rates (Jaffe and Stiglitz, 1990). This could also lead to banks or lenders choosing not to raise rates in the face of increasing demand; and deciding that there is too much demand for loans given the prevailing market rate. Loans would then be allocated via mechanisms that reduce the possibility of default (and raise the loan's profitability) unrelated to the interest rates they are carrying (e.g., requiring the backing of easily enforced guarantees, co-signers, among others).

These problems of adverse selection and moral hazard lead to higher costs in loan administration, as banks and other financial institutions must have specialized agents to evaluate firms' investment projects and families' ability to pay off the loans they are seeking. They must also be able to gather and monitor information sent by both types of borrowers and provide a platform for managing payments and legal reinsurance costs in the event of default, among others. Since some of these costs do not depend on the volume of loans, it creates a disincentive for financial institutions to offer credit services to small and medium-sized firms or low-income families, since these operations involve increased expenses for each monetary unit that is lent.

Externalities and coordination problems

Judging from the previous analysis, the financial system must generate and process information about firms and their projects and household credit histories to function properly. However, the decision to generate information -which is so important to resolving some of the problems described above- is also subject to market failures. By nature, information is a public good so providing it privately is not always optimum. Some banks will lack an incentive to invest in obtaining information and monitoring potential borrowers, especially when dealing with small loans, if there is a possibility that once the lender has generated a reliable credit history other banks or financial institutions can offer credit or other services without incurring the initial costs of generating and monitoring information.

On the other hand, when evaluating potential projects and loans, banks or other financial institutions only consider the private rate of return, and how this determines the loan's profitability. This could result in projects with high social rates of return being ignored due to the existence of externalities over the local economy. For example, private banks would lack incentives to locate themselves in relatively poor, isolated rural areas, even if a bank's presence there could reduce poverty and generate employment for small firms and/or poor families. The same can happen with financing innovative activities, although they may be more risky, they can also result in strong social gains. On the other hand, some financial services should have a certain minimum requirement

of profitability and being privately run. Putting this into practice may require coordinating decisions between various potential users, which can be difficult and expensive for an individual bank (e.g., the establishment of a platform to register factoring operations in the case of a productive chain).

To summarize the theoretical arguments for market failures that affect the financial system, it can be concluded that problems of adverse selection and incentives imply higher private costs (more risk) for the credit operations of financial institutions. And that higher cost or risk may only partially be resolved with higher interest rates for the loans. This would imply that lending operations are decided according to their financial strength, the availability of collateral and their capacity to generate short-term cash. These conditions to obtain credit -which are much more restrictive for SMEs relatively new to the market or low-income families with little credit history- may leave some low-risk clients with profitable projects out of the system because it is hard for investors and banks to evaluate them. Moreover, the generation of information -especially in the case of small firms and/or low-income households- is subject to problems of externalities and coordination that reduce private incentives to produce it, which perpetuates the financial market's malfunctioning.

PUBLIC POLICIES TO PROMOTE GREATER ACCESS TO FINANCIAL SERVICES: INSTRUMENTS AND ROLE OF THE PUBLIC BANK

The previous analysis described market failures that affect the financial system and how these lead to inefficiencies in volume, credit operations and other financial services. At the same time, analyzing access indicators demonstrated that the lack of access resulting from these obstacles affected production decisions, firms' investment and household welfare. Therefore, analyzing possible public policy interventions that attempt to resolve some of these inefficiencies is plainly justified.

Going forward, this report describes the different instruments or public policies that have been used recently to expand access to credit and other financial services to firms and families in the region. Next, it is discussed the extent to which the public bank plays a role in the implementation of these policies, highlighting the importance of Corporate Governance in positively influencing the performance of these institutions.

Intervention policies and instruments

What are the guidelines for justifying and evaluating the pertinence of different policies and instruments of public intervention into financial markets? Generally, those policies that directly attack market failures generated by the lack of information or incentive problems *a priori* have a greater chance of success. This would be the case, for example, of initiatives that improve the flow of information through promoting credit registries, as well as providing electronic infrastructure that favors the development of secondary markets or debt instruments such as factoring. Likewise, there has been a regional trend where the State has slowly stopped directly giving loans, instead acting as a second floor lender via discount or guarantee funds.

Chapter 3 describes the application of these initiatives in various countries of the region in the context of policies to promote credit for SMEs. The conclusion that emerges from this analysis is that there are instances where governmental intervention may be effective in improving access to financing for firms and spurring production volumes and productivity for the involved firms. These experiences are briefly presented next.

Guarantee funds are public institutions that form agreements with commercial banks so that the latter may back a part of their basket of loans to SMEs with these guarantees. This type of operations has several clear advantages over the direct lending of funds by the public sector. On the one hand, the fact that the guarantee tends to cover only part of the funds that the bank lends (between 50% and 80%) means that private financial intermediaries have an interest in correctly evaluating projects and select those that meet basic conditions of solvency. In other words, the public and private sector share the risk of these operations. On the other hand, private financial intermediation offers a reduction in administration costs and managing the loans, increasing the system's efficiency. Ultimately, and perhaps most importantly, this type of arrangement frontally attacks the problem of access to financing for SMEs generated by the lack of collateral. This creates social gains by providing financing to profitable projects that otherwise would not have been undertaken.

Existing evidence on the functioning of guarantee funds in the region shows that in some cases these have been successful in increasing access to credit and boosting business productivity. For example, small businesses are 14% more likely to obtain a loan from participating banks because of the Guarantee Fund of Chile (FOGAPE) (Larraín and Quiroz, 2006). In the case of the National Guarantee Fund (FNG) in Colombia, Arráiz *et al.* (2010) reported that this fund's intervention has positively impacted the size of companies, both in terms of employment and production, and the average wage.

Factoring is a type of program through which SMEs with favorable accounts receivables can sell those to a financial intermediary or a capital markets investor who by charging commission and interest will advance funds that the firm would otherwise charge in a span of 30 to 90 days. If SMEs are suppliers to large firms, it is clear that this operation includes credit that the SMEs have subject to the risk of their buyers, which typically reduces the cost of credit for the slightest risk involved. Thus, through this mechanism, SMEs can finance their working capital in a much more favorable way than borrowing money.

One of the most successful factoring programs in the region is implemented by NAFINSA in Mexico. This success is reflected both in the high number of firms and productive chains included in the initiative and the amounts financed. It is clear that this type of initiative resolves some of the problems previously mentioned. First, it promotes the supply of information from large firms that operate with SMEs, which reduces uncertainty and enables greater access and lower financing costs. Additionally, this scheme enables the coordination of decisions between large firms and SMEs into the same chain so that everyone may jointly participate in the program, making it more sustainable for firms and banks. Finally, the Government, through NAFINSA, also provides a public good, namely the electronic platform that enables the publication of information on firms and their receipts available for factoring, introducing greater competition.

The credit registries, meanwhile, constitute a direct form of resolving the problem of asymmetric information that affects financial markets by providing the different stakeholders in the market with information about the behavior of firms or families with their creditors. By improving the flow of information on potential borrowers, these registries may permit firms and families with good histories to access the credit market at the most advantageous terms (lengths and interest rates).

In a study conducted specifically for this publication, Galindo and Micco (2010) analyzed the effect of these registry programs on the use of bank loans by firms to finance investment. These authors found that the development of credit registries, measured as the number of records per capita, is an important factor in reducing the gap in access to bank financing between small and large companies.

The conclusions of the analysis of various policies to promote access to credit suggest that the provision of direct loans is not necessarily the best policy (or the most widely used). Recent experience indicates that there are other mechanisms that may be more efficient at directly solving market failures that arise in the financial market. In most of these cases, public participation occurs in a context of cooperation with the private financial sector, which results in cost-effective programs. In any event, there are still shortcomings with impact assessments -conducted with scientific rigor- to report more reliably on the effects of these initiatives.

Beyond these direct intervention policies, it should also be noted that there are other initiatives associated with regulatory and operational aspects of the basic laws that protect the rights of creditors and the court system, which can also be very effective in solving incentive problems. In this way, they reduce costs and risks involved in lending operations. This, in turn, stimulates the development of the financial system and credit, particularly towards SMEs and/or lower-income families. There are several empirical studies showing that firms based in countries with stronger property rights and more developed financial systems, increase the proportion of investment that is funded by credit or capital from outside investors (Beck *et al.*, 2004).

In the case of microfinance, governments can promote and co-finance training programs for entrepreneurs, thus bringing them closer to formal microcredit. As such, they can promote innovation by building bridges between academic communities and the MFI and co-financing the exploration of new products. They can also act as “conductors of the orchestra,” coordinating the actions of the different parties involved and indicating the regional penetration strategy. In any case, the intervention must be comprehensive and long-term oriented, as shown in the case of Banca de las Oportunidades in Colombia which, among other things, has sought to promote the geographical expansion of financial services by encouraging private banking and simplifying the rules for developing non-bank outlets and promoting the bankarization of families through the use of the financial system network for the payment of conditional grants.

Finally, a regulatory aspect that should not be overlooked is the potential policy dilemma that arises between promoting access and prudent regulation, which aims to ensure that financial institutions meet minimum standards of solvency and liquidity. These requirements may, for example, restrict the possibility for smaller microfinance institutions to capture deposits or savings, and this limits their ability to lend by eliminating a source of relatively cheap resources to fund their loans. As described in Chapter 4, the case of Peru is an example of regulation that seeks to achieve a satisfactory compromise between these two objectives by promoting access without jeopardizing the solvency or liquidity of financial institutions.

The public bank's function: mandate and Corporate Governance

From the point of view of the institutions through which public intervention is administered, it is interesting to note that in many of the policies mentioned above and others (such as low-cost savings accounts) aimed at promoting access to financial services to households, the main actor within the State is the public bank. The question then arises whether this necessarily justifies direct government presence in the banking sector and whether there is some form of public banking system under which the intervention is more efficient.

Empirical evidence shows, particularly in the case of Latin America, that direct State involvement in the financial sector has not always been a successful proposition. On the contrary, the public presence is usually accompanied by a series of distortions that are difficult to correct. Overall, public banks show a lower rate of efficiency in the allocation of credits (La Porta *et al.*, 2002). On average, they also generally have poorer business

performance compared to private banks. The reasons for this relatively unfavorable performance are manifold. Among those, it is worth noting major transformation costs, political pressures associated with election cycles and the worst rates of delinquency (Micco *et al.*, 2005).

However, these results do not necessarily negate the existence of such timely institutions. Such institutions often have a broader mandate that cannot be measured solely by business performance. Chapter 6 presents a detailed analysis of the role of public banks, and reviews the main arguments that justify their creation and operation. They recognize the great heterogeneity in their intermediation structures and internal institutional elements that could be critical to efficient fulfillment of their mandate. The analysis shows that the justifications for the existence of public banks is limited and there only seems to be room for the creation of certain types of entities, particularly those that play a role as development banks (e.g., loans to encourage innovation or exports, and access to credit for SMEs with growth potential), as well as for those institutions whose purpose is to promote access to services to certain sectors of the population and disadvantaged regions of the country.¹¹

However, even when based on such justifications a government decides to operate a public bank, it does not guarantee success. Three factors seem to facilitate the conditions for success: the focus of the mandate or strategic objective for which it was created (linked to identified market failure), the quality of specific regulations in the country, and the characteristics and strengths of its Corporate Governance (legal separation between the regulator and owner, disclosure, board independence, accountability mechanisms, etc.) All these factors interact to ensure that public banks achieve good performance, regardless of the justifications for its creation.

Indeed, a properly targeted strategic objective lends clarity to the entity's role and, from this mandate, the design of specific evaluation metrics, which along with financial sustainability, helps to truly measure their performance. The quality of financial regulations and laws to which a state financial institution is or is not subject are also key factors towards guaranteeing they comply with those regulatory requirements, which ensure viability and transparency. Finally, good Corporate Governance also aligns shareholder interests (in this case, the State) and the senior management that leads its administrative management. Achieving these conditions is not a simple matter, but they are central aspects in ensuring a successful public intervention.

As mentioned, a justification for public banks would be that of the development bank, whose purpose is to promote tools to solve market failures affecting the functioning of the financial system, which result in reduced access to credit for SMEs with strong growth potential. In this view, by considering the purely private benefits to financial resource allocation, private banks do not provide the level of credit that certain economic activities require (related to research and development, exports, or the emergence of enterprises), given the positive effect they would exert on the rest of the economy in the case of success.

It follows the idea that specialized public banks can finance projects that, while posing higher risk or longer maturity periods, have important "spillover effects." This type of bank, commonly called a "development bank," requires not only financial but also research capabilities to identify sectors and specific companies to promote. NAFINSA in Mexico is an example of a public bank aimed at this purpose. As mentioned in the previous section, NAFINSA managed to resolve various market failures by creating a technological platform for factoring

¹¹ An additional justification that has been mentioned most recently (de la Torre and Ize, 2010) stemming from the last financial crisis of mid-2008, is the possibility that the public bank can play a counter-cyclical role, given its capacity to shelter itself from the general deterioration of expectations that tend to accompany falling phases in the financial cycle. This aspect is important if the existing evidence on the strong procyclicality of credit is considered, particularly for loans to SMEs or low-income families in stressful economic situations, originating within the cycle's negative movements.

and a secure market to enable SMEs to transact their invoices in advance to improve their cash flow. This innovation encouraged Mexican private banks to penetrate and serve these types of businesses.

A second justification for the State's direct intervention as a bank operator is the need to ensure equal access to financial services to the entire population. According to such arguments, based on equity both between individuals and between geographical regions, certain conditions then prevent private banks from expanding their services to specific segments of the population or regions (such as rural areas or neighborhoods of extreme poverty), given the costs of serving these areas and the limited availability of local income or territories, these sectors do not end up being profitable.

In this situation, the state can intervene and create banks that cater specifically to this segment. Although no specific studies on rural public banks and public agricultural banks in Latin America exist, the evidence from some countries suggests that these banks may face the same problems of political economy as public banks in general, and not always end up serving the specific segment for which they were created. In this situation, the expansion of private financial institutions, such as microcredit or private banks with a focus on niche markets, could show greater flexibility and innovation in addressing these segments of the population.

At its heart, the solution to these problems is not always the founding of a State financial institution, but the combination of instruments and appropriate regulations. As mentioned before, Colombia's Banca de las Oportunidades clearly demonstrates that to achieve successful outcomes, the initiatives do not necessarily have to reduce the supply of financial resources by public banks, but they should seek to complement themselves with private banks.

However, it should be noted that despite regulations developed for this purpose, the private sector does not always end up responding to socially and economically important sectors and markets. Particularly in some countries, the private financial sector has not been effective in penetrating the lower segments of the population and addressing certain business sectors that are not being served, which is why public banks have to act as pioneers. For example, in Brazil, *Banco do Brasil* has been the main promoter of the expansion of bank branches precisely to comply with its strategic objective of banking services to the poorest sectors in both cities and rural areas. Similarly, in the same country, *Banco do Brasil* and *Caixa Econômica Federal* have been the most prominent developers in the market for so-called "simplified bank accounts," also designed for low-income sectors, and especially for users of various social programs. The *Caixa Econômica Federal* has also been the primary actor within the financial system in promoting access to mortgage credit for those most vulnerable by establishing a program, known as *Minha Casa, Minha Vida*, which seeks to bring together local governments, the federal government, construction companies and public banks. It is therefore necessary to recognize that public banks can sometimes play a leading role in developing these new market segments both in penetration and in the creation of new products.

However, beyond acknowledging that there may be justifications for the creation of public banks, as mentioned above, its simple existence and the fact that its mandate is clear in terms of its area of action does not guarantee success. It is also important that there are internal institutions to ensure good management. This could be promoted through certain Corporate Governance rules. In particular, the Corporate Governance of public banks should be designed to ensure that the State acts as a shareholder whose main interest is to maximize the company's value according to its economic and/or social purpose, without being directly involved in the daily operation of the institution; that the board and management do not capture the company to the detriment

of the shareholder, in this case the State, and that they act according to the mandate or the business or social objectives that are laid down; that any bank minority shareholders are treated equally with access to the same information as the majority shareholder; and that an independent board enables the bank to isolate itself from political pressures to promote the development of a professionalized management.

By meeting these objectives, Corporate Governance brings direct benefits beyond controlling tasks. Among these benefits is the improvement of credit rating institutions, which allows for greater and cheaper access to financial resources. An example of this is the Peruvian development bank COFIDE, whose management determined that to be competitive it had to reach investment grade by rating agencies. Once the strategic nature of this goal was defined, it was realized that the issue of Corporate Governance was central to obtain certification by the rating agencies.

More systematic measurement of Corporate Governance for a sample of public banks in Latin America indicates that the average value is relatively low (only 17 points from a maximum 50 points), demonstrating that there are deep flaws within the Corporate Governance of these types of institutions. This suggests that beyond the evidence that has given way to the creation of development banks, there is a whole area of institutional improvement for this type of financial institution to truly meet the public policy objectives for which it was originally created.

Summarizing what has so far been discussed regarding public policies to promote access to financial services, it can be concluded that there is room for public interventions that address market failures and imperfections that affect the functioning of financial markets and are partly responsible for the lack of access to services by businesses and families; credit being one of the clearest examples. These interventions must be framed within a new context characterized by the existence of more specialized tools that enhance a complementary relationship with private banks. Public banks could have an important role within the state in the implementation and management of these policies. However, it is worth highlighting the importance of the elements of Corporate Governance to these banks for the efficient fulfillment of their duties. These elements interact with the mandate's clarity and focus and the overall regulatory framework to encourage and promote successful intervention. The review of Corporate Governance in its different dimensions and from publicly available information reveals major shortcomings in this regard among the public banks in Latin America. Consequently, the strengthening of internal institutional elements of public banks should become a priority area for development.

CONCLUSIONS

Promoting greater access to financial services to a large portion of the population and firms of the countries in Latin America could promote growth and welfare in the region. This introductory chapter presented an analysis of the channels through which the connection between finance and development can effectively interact, and described international empirical evidence for support. However, despite the benefits of access to financial services as an engine of development, several measures that attempt to describe the volume of financial intermediation and access to these services by families and businesses in Latin America demonstrate that the region lags in this respect.

This conclusion seems to be supported by information provided in the CAF survey on access to financial services in 17 cities in Latin America.¹² New information suggests that on average only about half the families in those cities are bankarized (have an account). The proportion of households with a loan from the financial system is even smaller. However, it must be recognized that there is substantial variation among the cities and countries surveyed. It stands out that in countries that have more developed microfinance institutions (e.g., Bolivia and Peru), the use of formal credit instruments (the total access by families) is significant.

One aspect that is repeated in almost all countries is that while access to financial services increases with household income level, the curve slope is not steep. This suggests that the access problem afflicts a wide swath of the population, not only the poorest sectors in each country. In this sense, a large proportion of the middle class and upper-middle class in cities do not have a bank account in the financial system; a situation that is repeated in relation to credit. These results suggest that the problems or obstacles that families face in accessing financial services - particularly the most sophisticated such as credit - may be partly associated to problems with monitoring and enforcing debt contracts or macroeconomic instability, factors common to all the families and businesses in any given economy.

The expansion of microfinance institutions has been a very positive development, enabling significant segments of the population and microenterprises to access services. Microfinance has advanced in the region by virtue of the fact that it has made creditworthy subjects out of individuals that were historically excluded from the market. Microfinance institutions combine elements of the traditional bank with lessons from informal financial mechanisms and to a certain extent represent a “market” response to the immense demand unmet by the traditional financial system.

Its relative flexibility, proximity to the client and large innovative capacity has given MFI an advantage over the traditional bank in accessing this segment and demonstrating that it can be lucrative. However, despite the notable growth in the supply of credit that MFI has brought to microenterprises, dependence on information sources (such as lenders) continues to prevail. This could indicate that while the MFI are relatively flexible compared to traditional banks in attending to a very particular sector, its contracts may still seem relatively strict next to those offered by the informal sector.

Finally, another important conclusion is that there is a space for public interventions that solve market failures and other imperfections that affect the functioning of markets. These interventions should be framed within a context characterized by the presence of more specialized instruments that directly attack the identified problems and failures and that strengthen a complementary relationship with private banking. Notable among these interventions are credit initiatives for promoting innovation, guarantee provisions, factoring, the development of credit registries, the establishment of non-banking outlets and the facilitation of low-cost accounts for lower-income families. The public bank, especially the development bank, has and can still play an important role within the State in the implementation and administration of these policies. However, it should be noted the importance of Corporate Governance elements that together with a clear and targeted mandate and an overall regulatory framework constitute indispensable elements in fulfilling the public bank's functions.

¹² Buenos Aires, Cordoba, La Paz, Santa Cruz, Rio de Janeiro, São Paulo, Bogota, Medellin, Quito, Guayaquil, Lima, Arequipa, Panama City, Caracas, Maracaibo, Montevideo and Salto.



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