PART I

Stylized Facts and Summary

CHAPTER ONE

Introduction

BANKS play a pivotal role in the determination of living standards in modern economies. Banks have the ability to stimulate and collect a society's savings and allocate them among firms and sectors that demand capital as an input in their economic activities. Through the allocation of resources, the banking sector can determine and alter the path of economic progress, particularly in countries that have not yet developed alternative sources of financing such as deep capital markets. The role of banks also extends to credit allocation. By offering payments system services and protecting deposits, banks may become a cornerstone of economic prosperity.

In the context of this Economic and Social Progress Report on Latin America and the Caribbean, a bank is understood as an institution whose main operation consists of receiving deposits from the public and granting loans. In this process of financial intermediation, commercial banks finance most of their loans using deposits and have high leverage levels. The nature of this operation involves transforming assets in such a way that several risks are taken simultaneously.[1] When granting loans, banks face credit or repayment risk, liquidity risk (linked to differences in maturity between liabilities and assets), interest rate risk, and other market risks (for example, risks associated with the fluctuation of relevant prices such as the exchange rate). The combination of these makes banking activity inherently fragile, and this fragility is exacerbated by overall macroeconomic imbalances.

The Report analyzes several issues regarding the size, cost, and stability of bank credit, and relates them to the underlying risks that characterize banking. The Report includes thorough analyses of the determinants of the cost and amount of credit available to societies, as well as the determinants of the volatility of credit and the fragility of the banking sector. It stresses policy issues that have been and currently remain at the center of the ongoing financial debate throughout Latin America and the Caribbean.

WHY CARE ABOUT BANK CREDIT?

Most of the tasks carried out by banks are related to the efficient allocation of resources. This role is crucial for economic development. Banks are a key player in the allocation of capital and, hence, in stimulating economic development. In fact, bank credit and gross domestic product (GDP) per capita are highly correlated, as shown in Figure 1.1. Countries with small banking sectors have lower levels of development. This strong correlation is a clear sign of the link between financial and economic development.

From a theoretical point of view, the direction of causality of this link is not clear. Financial development may cause economic development by improving the allocation of savings in the economy, but also economic development, through the creation of good institutions and the required infrastructure, may foster growth in the financial system. Nonetheless, a series of recent empirical studies, such as the seminal papers by Levine and Zervos (1998) and Rajan and Zingales (1998), have shown that higher initial financial development implies subsequent higher GDP growth, proving that financial development in fact causes economic growth. Good banks that provide credit in an inexpensive and stable fashion are of great relevance for development.

Economic development is related not only to the development of the banking system, but also to the development of other financial intermediaries such as stock markets and nonbank credit providers. Table 1.1 shows bank, nonbank, and stock market development for a group of countries at different levels of economic development. Clearly, there are large differences in the various forms of financial development across countries. Developed countries have the most developed financial markets in every dimension and possess capital markets that can complement and in some cases even substitute for bank credit. For reasons that lie beyond the scope of

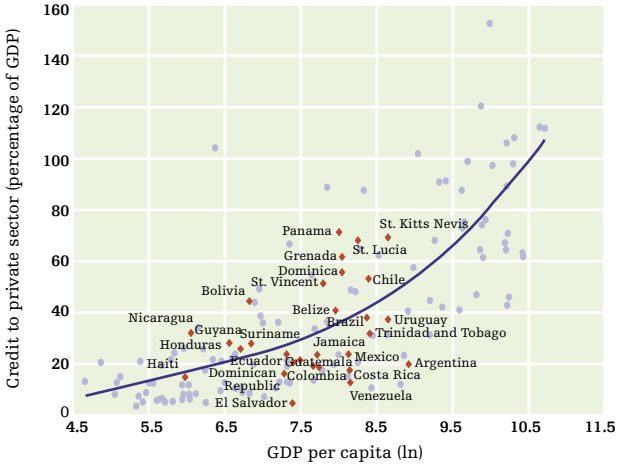
[1] For example, banks transform short-term liquid deposits into long-term illiquid loans. They transform several other characteristics of assets as well, taking many risks during the process.

TABLE 1.1 **FINANCIAL DEVELOPMENT BY INCOME GROUP, WORLDWIDE, 1990s**
(Percentage of GDP)

Income group	Banks	Other institutions	Stock markets
High	81	41	33
Upper-middle	40	21	11
Lower-middle	34	12	12
Low	23	5	4

Note: Values are simple averages for the World Bank's income groups.
Source: Demigüç-Kunt and Levine (1999).

FIGURE 1.1 **Banking Depth and Economic Development in Latin America and the Caribbean, 1990s**



Note: Average credit to the private sector over GDP and GDP per capita during the 1990s. Trend line using natural cubic spline.
Source: IMF and World Bank data.

this Report, strong capital markets have not developed in Latin American countries, and the main source of external financing for firms in the region is bank credit.

As is evident from Table 1.1, in relative terms, bank credit is much more relevant in developing countries than in developed ones. It is perfectly natural for countries with an underdeveloped banking system to have an underdeveloped capital market. International experience suggests that a security-based financial sector relies on a mature banking sector. That is, there is a sequential process in the development of banking and capital markets; the latter develops once the former is fully established (Rojas-Suárez and Weisbrod 1994). In order to work properly, capital markets need banks; and banks need capital markets to protect against certain types of risks and to grow as well. Usually, at the end of every capital markets transaction, there is a bank providing the necessary liquidity to complete the transaction. Moreover, banks play the role of market makers. A recent example is the development of public bond markets.[2] As expected, given its level of economic development, the financial sector in Latin America and the Caribbean is bank-based, and security markets are small and illiquid.

In a context of few alternative sources of financing, the development and stability of the banking sector is crucial for achieving a stable economic growth path. When capital markets are shallow, banks carry most of the responsibility of searching for safe and profitable investment projects in need of capital, and of supplying them that capital. Without an efficient means of capital allocation, profitable projects would not be undertaken, and economic growth could be hindered.

The stability of the credit supply process is also crucial for development. Long-term profitable projects require continuous access to sources of funding. An interruption in credit supply can lead to a disruption in investment and economic growth and prosperity. It is not surprising that countries with deeper credit markets exhibit higher rates of economic growth and lower volatility in response to shocks.[3] From this perspective, policies that increase the ability of banks to supply credit and to manage risks appropriately are important for exploiting the potential benefits of cred-

[2] Other examples include the development of services such as insurance and leasing. The reason banks are at an advantage in initiating the development of these services is their access to information on risks.

[3] See, for example, King and Levine (1993), Rajan and Zingales (1998), and Beck, Levine, and Loayza (2000) for discussions of how financial development causes economic growth, and Galindo and Micco (2004b) for a discussion of how more financially developed countries tend to be more stable after an external shock hits the economy.

TABLE 1.2 | **FINANCIAL DEVELOPMENT BY REGION, 1990s**

Region	Number of countries	Credit to private sector (percentage of GDP)	Credit and market capitalization (percentage of GDP)	GDP per capita, 1995 (U.S. dollars)
Developed countries	24	84	149	23,815
East Asia and the Pacific	10	72	150	2,867
Middle East and North Africa	12	43	80	4,416
Latin America and the Caribbean	20	28	48	2,632
Eastern Europe and Central Asia	18	26	38	2,430
Sub-Saharan Africa	13	21	44	791
South Asia	6	20	34	407

Note: Values are simple averages for the regions for the 1990s.
Source: IMF and World Bank data.

it markets in achieving efficient credit allocation and fostering economic growth.[4]

The discussion above stresses the great importance of banks in providing capital efficiently to finance investment projects. But there are several other tasks that banks undertake that also support economic activity. Banks provide liquidity and access to a payments system. In a world without transaction costs, where information was available and free to everyone, there would be no need for money. However, given the existence of frictions and information limitations, the use of money is more efficient than pure barter. For example, because of the size of transactions or the physical distance between parties in a transaction, the use of nonphysical forms of money—such as checks, debit cards, and credit cards—is crucial for the adequate performance of goods and services markets. Banks provide a clearing system and a complete network to facilitate most economic transactions by guaranteeing that the payer at one end of a transaction will in fact deliver the agreed funds to the payee at the other end of the transaction in a quasi-automatic way. The ability to efficiently transfer funds between agents is essential for a market-based economy. Costly and ineffective transactions can hinder the behavior of several markets. Hence, protecting the payments system has become a policy objective in itself.

Providing a safe set of institutions to protect savings, allocate resources efficiently, and support the efficient handling of financial transactions is crucial for development. However, due to problems related to asymmetric information and full contractibility between borrowers and lenders, the management of risks is not straightforward. Creating and maintaining a safe and sound banking system is a difficult task.

BANK CREDIT IN LATIN AMERICA AND THE CARIBBEAN: STYLIZED FACTS

Bank credit is scarce in Latin America and the Caribbean. During the 1990s, the average level of credit to the private sector in the region was only 28 percent of GDP, a rate significantly lower than that of other groups of developing countries, such as East Asia and the Pacific (72 percent), and the Middle East and North Africa (43 percent). The size of the region's credit markets, as shown in Table 1.2, is shockingly small when compared with developed countries (84 percent).

A larger view of the financial sector, including bank credit as well as capital markets, leads to the same conclusion. Despite the fact that the current level of credit to the private sector in Latin America and the Caribbean compares favorably with the level observed in the past, other groups of developing countries have experienced much faster development of their banking industries. For example, credit to the private sector in East Asia averaged 15 percent of GDP in the 1960s, whereas now it exceeds 70 percent of GDP, while Latin America and the Caribbean has gone from 15 percent to 28 percent.[5]

The problem is not only one of small credit markets. A great source of concern is that apparently in many countries, the size of the financial sector is even smaller than what would be consistent with their level

[4] For a discussion on financial liberalization and efficient credit allocation, see Galindo, Schiantarelli, and Weiss (2003); for the impact on financial liberalization and growth, see Galindo, Micco, and Ordoñez (2002b).

[5] Based on IMF and World Bank data.

of economic development. Figure 1.1 shows that for the region as a whole, credit to the private sector is close to the expected value (the trend line in the figure), given the level of GDP per capita; however, there is a great deal of heterogeneity in the region, in particular between Caribbean countries and the rest of the region. Except for Bolivia, Chile, and Panama, most of the continental Latin American countries have a small banking sector for their level of development (Figure 1.1). Countries such as Argentina, El Salvador, Mexico, and Venezuela have very underdeveloped banking sectors. In Argentina, the level of credit to the private sector during the 1990s (20 percent) was 30 percentage points lower than predicted for its level of development (50 percent). On the other side of the spectrum, most Caribbean countries present larger banking sectors than expected, given their development level. Explaining why financial development is so far behind in most countries and studying policy recommendations to deal with this are some of the main tasks of the Report.

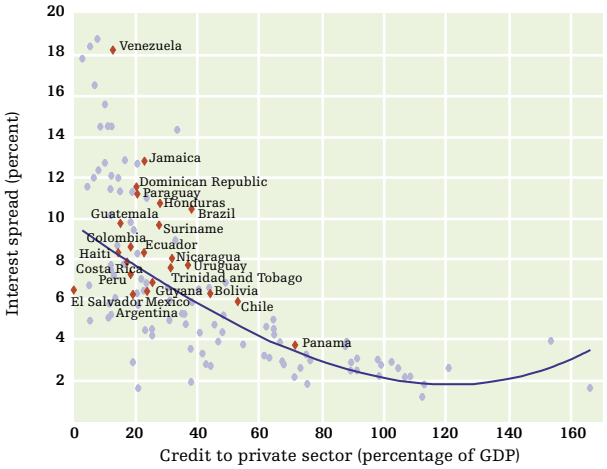
The underdevelopment of the financial sector in general and the small banking sector in particular imply that one of the major problems faced by businesses in Latin America is accessing financial markets. For almost all Latin American countries covered by the World Business Environment Survey, access to credit was the most serious concern.[6] In countries where credit constraints are tighter, firms are unable to grow properly. IDB (2001) estimates that on average, a large firm, which in principle should be less credit constrained than small and medium enterprises, could increase its assets by nearly 5 to 8 percent for every 10 percent increase in domestic financial depth. Moreover, as shown in this Report, small and medium enterprises are more credit constrained in Latin America than elsewhere.

Underdeveloped banking sectors are related not only to lower amounts of credit, but also to higher interest rate spreads—the difference between the interest rate charged to borrowers and the rate paid to depositors—and therefore higher lending rates and lower net returns to savings. The spread between these two returns reflects (i) the efficiency and market power of the banking sector; (ii) the risk of default on loans; (iii) liquidity, currency, and other risks; (iv) underlying regulations; and (v) explicit and implicit bank taxation. High lending rates, which result from the cost of funds for banks and their spread, is another major concern of businesses in Latin America and the Caribbean.

Figure 1.2 shows the close relationship between banking depth and interest rate spreads—measured as net interest income divided by the average of loans and deposits—in 1995–2002. Countries with small banking sectors have high interest spreads. Venezuela has the third-highest margin in the world (18.3 percent). Panama, which has a well-developed financial sector, has a low interest spread (3.8 percent), which is close to the mean spread observed in developed countries (3.5 percent). In the Latin American and Caribbean region, Panama and Chile have the lowest spreads. Table 1.3 shows the average interest spread in different regions of the world. As a whole, Latin America and the Caribbean has one of the highest spreads in the world (8.5 percent), just below that of Eastern Europe and Central Asia (8.8 percent).[7] At the other extreme, developed countries have the lowest spreads (2.9 percent). In Latin America and the Caribbean, credit is not only scarce, but also costly. Explaining its cost is also a task carried out throughout the Report.

As mentioned above, one of the most important determinants of spreads is the efficiency of the banking industry. Estimating the efficiency of banks, however, is not an easy task. The simplest way to do this is to use balance sheet data and compare overhead costs (expressed as a share of total assets) for banks across

FIGURE 1.2 Interest Spreads and Banking Depth in Latin America and the Caribbean, 1995–2002



Note: Interest spread is the mean value for 1995–2002 and credit to the private sector over GDP is the mean value for the 1990s. Trend line using natural cubic spline.
Source: IMF and BANKSCOPE data.

[6] The World Bank conducts the World Business Environment Survey on firms across the world. Chapter 14 presents details on the survey.

[7] The median country in Latin America and the Caribbean has a higher spread than the median country in Eastern Europe and Central Asia.

TABLE 1.3 | **INTEREST SPREAD AND EFFICIENCY BY REGION, 1995–2002**

Region	Number of countries	Interest margin (percent)	Overhead costs (percentage of assets)	Credit to private sector (percentage of GDP)
Sub-Saharan Africa	32	10.6	5.1	15
Eastern Europe and Central Asia	23	8.8	5.0	26
Latin America and the Caribbean	26	8.5	4.8	37
East Asia and the Pacific	16	5.1	2.3	57
South Asia	5	4.6	2.7	23
Middle East and North Africa	13	4.0	1.8	38
Developed countries	30	2.9	1.8	89

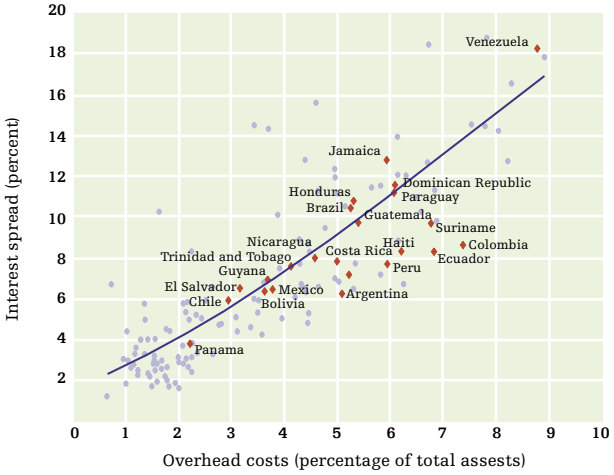
Note: Mean values for 1995–2002.
Source: IMF and BANKSCOPE data.

countries (Mathieson, Schinasi, and others 2001). Figure 1.3 plots interest rate margins and overhead costs. The figure shows a strong positive relationship between overhead costs and spreads, confirming that inefficient banking sectors have higher spreads. Not surprisingly, Venezuela has one of the highest overhead costs in the world (8.8 percent), whereas Panama has a level similar to that of developed countries (2 percent). The Report also explores issues explaining these inefficiencies, particularly those related to the way institutions that govern banking markets affect bank performance, as well as those related to the changing nature of the ownership structure of the Latin American banking industry.

Beyond financial depth and low interest margins, financial stability is also crucial for growth. Fluctuations in access to bank credit and uncertainty about the stability of the banking system are serious constraints for economic prosperity. Interest rate volatility and abrupt credit swings increase business uncertainty and therefore reduce investment and growth.

Table 1.4 reports the volatility of real credit—measured as a country's standard deviation of real credit growth during the 1990s—for regions of the world. Eastern Europe and Central Asia had the highest credit volatility during the 1990s (21 percent). This is not surprising considering the drastic economic changes that formerly communist countries underwent during this period. Sub-Saharan Africa (18 percent) and Latin America and the Caribbean (14 percent) are the next two regions with high credit volatility. Developed countries have the lowest credit volatility (6 percent). In terms of financial development, Figure 1.4 shows that countries with a higher level of credit market development, measured as bank credit over GDP, have much lower credit volatility.[8] Focusing on Latin America, Panama has the lowest volatility (6 percent), and Venezuela has one of the highest values in the region (25 percent), similar to Mexico but lower than that of Brazil (28 percent).

FIGURE 1.3 Interest Spread and Overhead Costs in Latin America and the Caribbean, 1995–2002



Note: Average values for 1995–2002. Trend line using natural cubic spline.
Source: BANKSCOPE.

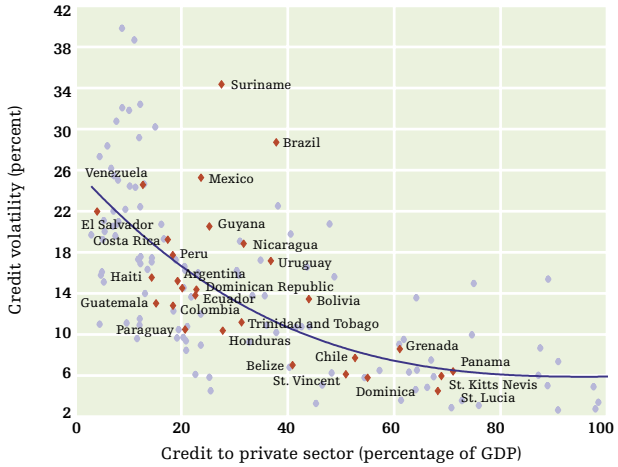
[8] This strong correlation remains significant after controlling for the shocks that countries faced in the 1990s (results not reported here). These exercises control for either GDP volatility or external demand shocks (measured as the weighted average of GDP growth rates of a country's external trade partners).

TABLE 1.4 | **CREDIT VOLATILITY BY REGION, 1990–2002**

Region	Number of countries	Credit volatility without adjustment (percent)	Credit volatility adjusted by GDP volatility (percent)	Credit volatility adjusted by external shocks (percent)
Sub-Saharan Africa	37	18	17	19
Eastern Europe and Central Asia	20	21	16	18
Latin America and the Caribbean	31	14	15	14
East Asia and the Pacific	16	14	14	12
Middle East and North Africa	16	12	12	11
South Asia	6	9	12	8
Developed countries	24	6	8	6

Note: Results in the third and fourth columns are normalized to have the same worldwide aggregate credit volatility as in the second column.
Source: IMF and World Bank data.

FIGURE 1.4 Credit Volatility and Financial Development in Latin America and the Caribbean, 1990–2002



Note: Trend line using natural cubic spline.
Source: IMF data.

Differences in credit volatility are explained by differences in the size of the shocks that hit countries. Table 1.4 presents measures of credit volatility after controlling for differences in GDP volatility and a measure of external shocks proxied as the growth rate of the GDP of a country's trading partners. Not surprisingly, after controlling for country-specific shocks credit volatility increases in developed countries (because in general their economies suffer small shocks), and decreases in Eastern Europe and Central Asia because of the large shocks that region faced during the transition from communism. The table also reveals that Sub-Saharan Africa has the highest intrinsic credit volatility (17 percent), which is not much greater than that in Latin America and the Caribbean (15 percent).

The high volatility in the region comes from the fact that credit growth in Latin America and the Caribbean has been marked by very strong boom-bust cycles. Financial liberalization, the promise of market-friendly reforms, and large capital inflows at the beginning of the 1990s spurred credit growth in the region. In 1994, the Tequila crisis, which came with a number of banking crises, blunted the rapid growth trend. In 1996, after banks in many countries were restructured and/or capitalized, real credit regained its impetus. But again it came to a drastic stop after the Russian crisis in mid-1998. Since then, credit has been falling despite an increase in economic activity during the past few years.

Cases of extreme credit volatility are usually the result of systemic crises in the banking industry. A severe crisis invariably disrupts the real economy through its effect on the supply of credit and the interruption of the payments system. Banking crises occur throughout the world, but they are particularly severe and frequent in developing countries. Drawing from a comprehensive dataset on banking crises ranging from the 1970s to 2002, Table 1.5 describes the somber performance in Latin America and the Caribbean. Compared with other regions, Latin America displays the highest average number of crises per country. Moreover, when ranking regions by the share of countries that have experienced two or more crises, Latin America comes out first, with 35 percent of its countries having experienced recurrent crises. This share is almost three times higher than in any other region. These results are striking, and

TABLE 1.5 | **RECURRING BANKING CRISES, 1974–2003**

Region	Average number of crises per country	Countries with recurrent crises (percent)
Latin America (excluding the Caribbean)	1.25	35
Latin America and the Caribbean	0.90	27
High-income OECD countries	0.21	0
High-income non-OECD countries	0.09	0
Eastern Europe and Central Asia	0.89	11
East Asia and the Pacific	0.38	8
South Asia	0.38	0
Middle East and North Africa	0.40	0
Sub-Saharan Africa	0.83	13

Source: IDB calculations based on Caprio and Klingebiel (2003).

they highlight the need for appropriate crisis avoidance mechanisms in the Latin American and Caribbean region. The recurrence of banking crises is particularly worrisome because they are costly.

Explaining the causes of volatility and ways of reducing banking fragility are at center stage in the Report. The role of macroeconomic factors, weak institutions, and regulations in explaining bank fragility are discussed extensively in the upcoming chapters. In brief, the stylized facts presented above indicate that bank credit in Latin America and the Caribbean is scarce, costly, and volatile. The Report revisits these three main issues, addresses why these adverse characteristics have prevailed, and provides policy recommendations. Dealing with these issues is not trivial. The risk-taking nature of banks and their highly leveraged balance sheets make them difficult to stabilize and regulate.

WHAT MAKES BANK CREDIT SPECIAL?

Banks take deposits from the public and offer loans to households and entrepreneurs through credit contracts. Such contracts are complex and depend on supporting institutions to avoid problems of asymmetric information and lack of full contractibility. Credit contracts must also deal effectively with diverse risks. Risks concerning borrowers arise from uncertainty about the projects and the borrowers themselves. In addition, the behavior of depositors and the combination of borrowers and depositors generate risks. In short, banks face credit or repayment risk, liquidity risk, interest rate risk, and other market risks. In order to work and behave properly, banks need fine-tuned supporting institutions that align the incentives of all players and ease the complexities of risk management. They also need a stable and safe macroeconomic environment that enables them to carry out their crucial tasks for society.

Loan risk and the associated fragility of banks could undermine the confidence of depositors and, therefore, limit the mobilization of national savings. Given that in most cases the general public is not equipped to assess the safety of banks and does not have the right incentives to do so, there is a need for an external agent to verify that banks preserve the interests of individuals.[9] This external agent is usually the government itself in the form of the central bank, banking superintendency, and other supporting institutions such as deposit insurance agencies.

A collapse in banks can have enormous social consequences by disrupting the supply of credit, breaking the payments network, and eroding the value of savings. These facts justify the need for governments to intervene in the banking business via regulation and supervision in order to guarantee that bank managers' decisions are aligned with social welfare. An adequate institutional and macroeconomic environment that guarantees the soundness of banking is crucial in order to exploit as much as possible the multiple advantages of having a deep and stable source of credit and a stable payments system.

The process of intermediating funds, that is, taking deposits and offering loans, goes far beyond matching borrowers with lenders. Financial intermediation in

[9] The free-rider problem arises because depositors individually will not monitor their bank because they believe that other depositors will do it.

a modern society involves transforming several characteristics of the assets involved in a financial transaction, managing the risks involved, processing information using the latest technologies, and monitoring borrowers. All of these functions involve risks that have to be dealt with carefully. Risk mismanagement can lead to a meltdown of the banking system and to financial catastrophes that, as shown in the Report, not only are very costly, but also are difficult to recover from. The Report discusses the risks of banking in detail and addresses several alternatives to deal with them in the years ahead.

In the process of intermediating funds, banks need to transform deposits into loans. In many cases this process includes transforming the nature of the deposits that they take and converting them into assets that have particular characteristics that satisfy the needs of the investment project of the borrower, which tend to differ from the saving preferences of the depositor. For example, banks transform the denomination, maturity, and in many cases quality of their liabilities in order to grant borrowers the instruments that best match their needs. Some of the risks that banks need to manage are credit risk, interest rate risk, currency risk, and maturity risk.

Dealing with credit risk, that is, the risk that the borrower may not pay back the loan, is one of the crucial functions of banks. On the one hand, lenders face uncertainty because any project has some probability of failure. The ability to choose among investment projects is an extremely important role that banks undertake in the process of allocating capital efficiently. On the other hand, banks also lack complete information about their borrowers. Although under some conditions borrowers may not be able to pay back their debts because projects fail, it may also be the case that borrowers find it in their interest to default, even when they may have the resources to repay their debts. Moral hazard—the possibility that the debtor may not want to pay back the debt or provide the necessary effort to make the investment project succeed once the loan has been disbursed—is a common feature in credit contracts. When making loans, banks are usually uncertain about the degree of effort that an entrepreneur will put in a project, or even worse, about whether the project will succeed or fail. Thus, banks incur a risk when granting credit.

In addition, also because of asymmetric information, banks have to deal with a problem known as adverse selection. Banks have to cope with uncertainty about the type of borrowers that they face and must find ways to screen good from bad borrowers. In general, it is difficult for a bank to know with certainty the quality of the project that it is financing. Particular bank policies, such as interest rates charged on loans, may be subject to adverse selection problems that attract low-quality participants. For example, consider the case of a bank facing two types of projects, one with high volatility and high return, and another with low volatility and low expected return. A high rate on loans may discourage low-risk borrowers, leaving banks only with high-risk projects. This of course would be deleterious for the quality and stability of the bank. For this reason, banks may choose to ration credit instead of charging higher interest rates because they know that those willing to take higher interest rates would be those with risky projects. There are several procedures that have been suggested to mitigate this problem, such as the use of collateral (see Coco 2000). Once again, banks have a comparative advantage in dealing with these issues, provided a proper institutional setup is in place.

With respect to the denomination of deposits, there are several transformations that take place in a bank when making loans. The simplest transformation is that of units. Usually deposits come in small sizes from many small depositors. However, borrowers usually need large loans. Banks transform many small deposits into fewer larger loans by pooling deposits. This of course implies risks. If one of the depositors wants to leave the pool, the bank needs to be able to generate some liquidity to return what the depositor deposited. Not being able to do so could generate a lack of confidence in the bank, which, if large enough, could induce a run on deposits and eventually spread to the banking system. To protect against these risks, banks must keep liquid assets and a certain amount of reserves. Regulation plays an important role in guaranteeing that bank portfolios are sufficiently liquid.

Banks also transform the maturities of their liabilities, which are usually short-term, into longer-term loans that better suit the needs of investment projects. Obviously, this also implies taking risks, given that if depositors wish to withdraw their funds before a loan contract comes to an end, the bank will face the need to search for that liquidity elsewhere, or in extreme cases even force the liquidation of the investment project. If, for example, a bank is not able to service deposit withdrawals made by a particular depositor, not because it is insolvent, but because its loans are long-term, and if other depositors suspect that the bank may indeed be insolvent, then a bank run may materialize. The ability to avoid such events at the individual bank level, as well as the skill to prevent isolated runs from becoming systemic, requires proper rules, regulations, and supervision in order to limit or deal effectively with maturity mismatches. In addition, institutions must be harnessed

to provide liquidity to solvent but illiquid banks and to protect depositors in case of bank failures. In summary, a financial safety net comprising the interaction of these and other institutions that support financial stability must be established. The Report discusses the optimal configuration of a financial safety net.

Banks can also transform the currency denomination of deposits when offering loans. In several countries, regulators allow deposits and loans in various currencies. Banks may take some deposits in local currency, but borrowers might prefer foreign currency-denominated debts that match their future cash flows in order to avoid currency risk. In such cases, a loan in local currency is not necessarily the best alternative for the borrower, who would incur additional transaction costs for currency conversion. Similarly, depositors may prefer to save in foreign currency rather than in local currency. In such a case, banks may take deposits in foreign currency.

Some of the risks of having a currency mismatch (different values of dollar-denominated assets and liabilities) are straightforward and arise from the different preferences of borrowers and lenders in terms of the currency composition of their liabilities and assets. If, for example, banks have more deposits than loans in foreign currency, an increase (depreciation) in the exchange rate may lead to a reduction in banks' wealth. Such a negative balance sheet effect could ultimately lead to broader financial instability. In order to avoid these problems, regulators provide guidelines for banks to limit currency mismatch. However, as discussed in several parts of the Report, there is another source of mismatch that has proven to be equally harmful for banks and more complicated to regulate: the currency mismatch of borrowers. In many cases, banks lend in foreign currency to borrowers that have an income stream in domestic currency. In such cases, a depreciation of the exchange rate affects borrowers' net worth and diminishes their ability to repay loans, thus undermining banks' capacity to meet the withdrawals of depositors.

In some countries—among them Brazil, Chile, and Colombia—deposits and loans can also be denominated in alternative currencies, such as CPI-indexed units. Here, too, banks can transform deposits and loans from nonindexed to indexed units of account and vice versa, creating risks similar to the currency risks and systemic challenges experienced in some Latin American countries.

Banks also transform the quality of assets. An individual investor may find it difficult to obtain inexpensive sources of financing. By contrast, a bank with an established reputation and franchise value can find cheaper funding through deposits mainly because of its diversified portfolio. In this sense, a bank can transform risky assets (loans) into less risky liabilities (deposits). Of course, the franchise value of the bank, which is preserved through sound management practices, is crucial to fulfill this role.

The role of banks in transforming assets helps provide entrepreneurs an appropriate supply of funds on conditions that are consistent with the nature of investment projects, while guaranteeing depositors the safety of their funds. Clearly, many risks are borne in the process. In such a context, banks play an important role in managing risks; it is a role that, due to its complexity, individual lenders cannot usually undertake. Economies of scope and scale prevail in bank operations.

Dealing with credit risk and market risks, such as interest rate and currency risks, requires a great deal of expertise. Banks have developed this skill, but nonetheless there is a crucial role for regulation and for regulators to monitor banks in order to guarantee that bankers represent the interests of depositors and maximize social welfare.

In order to survive in a world of many risks, banks need to develop mechanisms to assess risks effectively and efficiently, as well as ways of protecting their worth and franchise value in the event that risks materialize. The traditional way of coping with risks is by imposing capital requirements and provisions to cover unexpected losses. The Report discusses these issues in detail in the chapters on banking regulation and supervision.

Success in mitigating risks depends on effective monitoring of borrowers and accurate processing of information in order to identify creditworthy borrowers. Owing to the large scale on which banks operate, they can invest in a cost-effective way in the information technologies that simplify the monitoring and identification of clients. Moreover, given the repetitive nature of the lending process, banks can develop long-term relationships with their clients that ease these tasks.

FINAL REMARKS AND STRUCTURE OF THE REPORT

Bank credit is the main source of external funding for firms in Latin America and the Caribbean. Unfortunately, bank credit remains scarce, costly, and extremely volatile. The Report analyzes the causes of each of these three main characteristics of bank credit.

The Report is divided into five parts. Part I presents the basic stylized facts and provides a summary of

the main results of the Report. Part II provides a detailed analysis of the determinants of banking crises, with particular emphasis on the Latin American and Caribbean experience. It also addresses crisis resolution as well as the setup of a financial safety net to reduce the likelihood of crises. Chapter 4 takes a detour through issues concerning financial dollarization, which is important for many countries in the region. Part III discusses how the changing ownership structure of the banking sector has affected its performance. Of particular interest is the role played by foreign banks, state-owned banks, and the increased concentration of the industry over the past few years. Part IV studies the role of additional supporting institutions in providing increased access to credit at lower cost. Finally, Part V concludes the Report by discussing several remaining challenges of crucial importance in Latin America and the Caribbean, such as approaches to the changing nature of international banking standards on the eve of Basel II and ways to deal with money laundering in the region.