

## Foreign Banks

**T**HE ownership structure of banking systems worldwide has undergone deep changes in the past few decades. The entry of foreign banks has been a dominant characteristic of this process, and in many countries foreign-owned banks have become the main players in the domestic financial system. By the third quarter of 2003, foreign banks headquartered in developed countries were lending a total of US\$1.45 trillion to developing countries. Sixty percent of this was either cross-border lending or domestic lending in foreign currency; the remaining 40 percent (US\$600 billion) was lending by local branches and subsidiaries in domestic currency.<sup>1</sup> (Box 10.1 discusses the various ways in which foreign banks can enter a given market.)

Cross-border lending represents more than 20 percent of domestic credit in developing countries, and domestic currency lending by foreign banks corresponds to 15 percent of total bank lending in developing countries.<sup>2</sup> The presence of foreign banks is particularly important in Latin America, where local currency lending by branches or subsidiaries of foreign banks represents more than 65 percent of total bank lending, and cross-border lending is 60 percent of domestic credit (Figure 10.1). Foreign bank lending is also important in Eastern Europe and Central Asia and less important in East Asia and Africa and the Middle East.

It is interesting to look at the composition by source country of total foreign lending to Latin American residents (cross-border loans and domestic loans issued by foreign-owned banks). Spanish banks are the largest lenders, with approximately one-third of the total share, followed by the United States, the United Kingdom, Germany, and the Netherlands (Figure 10.2). The foreign bank concentration of a few source countries is even greater if the calculations take into account the total local currency claims by branches and subsidiaries of foreign banks located in Latin America (Figure 10.3). In this case, the share of Spanish banks increases to almost 50 percent, and that of U.S. and British banks is 25 and 11 percent, respectively.

However, the data reported above do not fully capture the local market share of foreign banks for at

least two reasons. First, the foreign currency lending of local branches or subsidiaries is included in the cross-border lending entry and excluded from the local market activities of foreign banks. Second, the data of the Bank for International Settlements (BIS) do not include the activities of local subsidiaries that are controlled by foreign banks but not officially headquartered in a reporting country.<sup>3</sup>

The balance sheet data of banks operating in developing countries can help draw a clearer picture. Figure 10.4 shows the evolution of the share of total bank assets owned by foreign banks in 10 Latin American countries. In the mid-1990s, foreign banks had a significant presence in Chile (about 30 percent of total bank assets) and Argentina (about 20 percent of total bank assets), and a more limited presence in Colombia, Peru, and Brazil (between 10 and 20 percent of total bank assets). Their market share in the other countries for which data are available was well below 10 percent. By the end of 2002, foreign banks controlled approximately 70 percent of bank assets in Mexico (see Box 10.2), and more than 50 percent of bank assets in Chile, Argentina, and Peru. The presence of foreign banks in Brazil also more than doubled (from 10 to 26 percent) over the 1995–2002 period. The increase in the pres-

<sup>1</sup> The data are from the Bank for International Settlements (Table 10.1 of the Consolidated Banking Statistics for the Third Quarter of 2003, available at [http://www.bis.org/publ/r\\_hy0401.pdf](http://www.bis.org/publ/r_hy0401.pdf)). Total international loans include total loans to the residents of the host country by banks headquartered in reporting countries (all the European Union countries except Greece, plus Australia, Canada, Japan, Norway, Switzerland, the United Kingdom, and the United States). International loans are divided into cross-border loans and domestic loans in foreign currency.

<sup>2</sup> Figure 10.1 shows the ratio of domestic currency lending in host countries by branches or subsidiaries of foreign banks located in the host country to total bank credit. The figure also shows cross-border lending plus foreign currency lending in host countries by branches or subsidiaries of foreign banks located in the host country (again expressed as a share of domestic bank credit). The sum of the two measures provides the ratio of total foreign lending to total domestic credit.

<sup>3</sup> For instance, they do not include the activities of, say, the subsidiary of a Canadian bank that operates in Chile but is officially headquartered in the Cayman Islands.

**BOX 10.1 | TYPES OF FOREIGN BANKS**

A foreign bank can enter a given market in one of the following four organizational forms:

- *Representative offices* require the least amount of resources. They act as an agent of the foreign bank and do not make loans or take deposits. They are often established either to provide services to customers based in the source country that have activities in the host country or to test the ground for expanding the bank's activities in the host country.
- *Agencies* are often allowed to make loans, but they do not usually operate at the retail level and do not take deposits.
- *Branches* are an integral part of the parent bank, and as such their liabilities are fully backed by the parent bank's assets. Although they offer more services than agencies and representative offices, host or source-country regulations may impose limits on their activities that do not apply to domestic banks. Branches often operate in the wholesale market. Because the activities of branches are subject to source-country regulations, foreign banks tend not to use this organizational form when they have

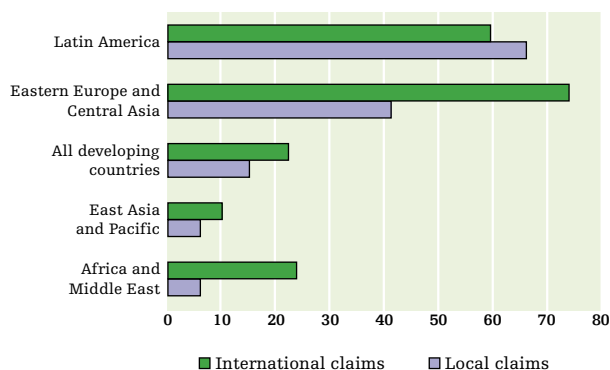
headquarters in a country that does not allow universal banking and the host country allows universal banking.

- *Subsidiaries* are banks incorporated in the host country but owned by a foreign company. The assets of the parent bank do not back the liabilities of subsidiaries. They can perform the same activities and are subject to the same regulations as domestic banks.

There are two methods by which a foreign bank can enter a foreign market: de novo entry and the acquisition of an existing domestic bank. Most of the entry of foreign banks in the Latin American market has been through the acquisition of existing domestic banks. This is important because although de novo entry may increase the number of banks and the degree of competition, the acquisition of existing banks often takes place through mergers and acquisitions that may reduce the degree of competition.

Source: Based on Goldberg and Zimmerman (1992).

**FIGURE 10.1** Foreign Bank Activity as a Share of Domestic Credit (Percent)



Source: BIS data, third quarter 2003.

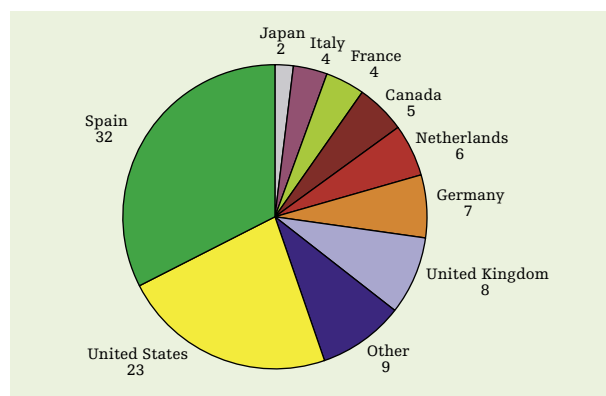
ence of foreign banks in Latin America resulted from the process of financial liberalization and global financial integration.<sup>4</sup> In some countries, banking crises and the consequent need for foreign resources for the re-

capitalization of the banking system also accelerated foreign bank entry (see Box 10.2).

Given the massive entry of foreign banks in the Latin American market, it is interesting to analyze what drives a bank's decision to expand abroad. The traditional view states that banks enter foreign markets to follow their clients (Aliber 1984). According to this view, the internationalization of the banking system is a consequence of the increasing importance of nonfinancial foreign direct investment (FDI). Although there is a positive correlation between nonfinancial FDI and foreign bank entry in a given market, it has been impossible to establish whether FDI causes foreign bank entry, whether foreign bank entry causes FDI, or whether the association between these factors is driven by other factors omitted in the statistical analysis. Studies focusing on foreign bank entry in developed and developing countries find limited evidence for the hypothesis that banks tend to follow their clients, especially in expan-

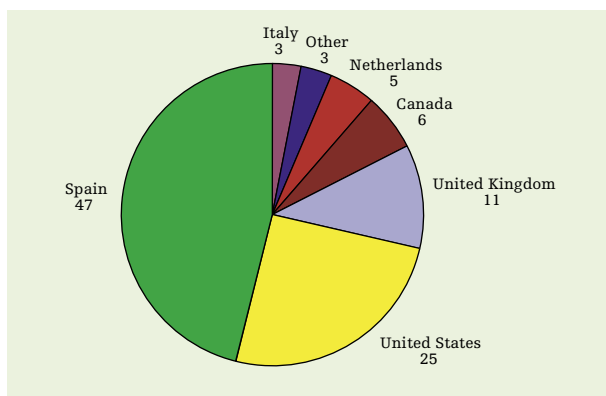
<sup>4</sup> See IDB (2002, Chapter 5) for a description of financial liberalization in Latin America.

**FIGURE 10.2** Foreign Bank Lending and Cross-Border Loans to Latin America (Percent)



Source: BIS data, third quarter 2003.

**FIGURE 10.3** Foreign Bank Lending to Latin America (Percent)

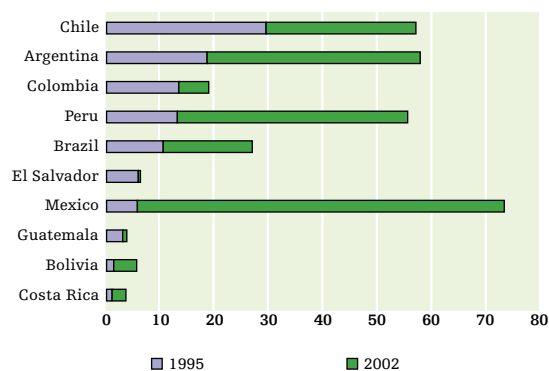


Source: BIS data, third quarter 2003.

sion to developing countries (Seth, Nolle, and Mohanty 1998; Miller and Parkhe 1999). Other studies focusing on commerce find evidence that bilateral trade is correlated with FDI in banking (Brealey and Kaplanis 1996; Williams 1998).

An alternative theory suggests that foreign banks, like other businesses, enter countries where they see profitable opportunities and a good institutional and macroeconomic environment. Accordingly, Focarelli and Pozzolo (2001) find that foreign banks tend to enter countries characterized by high economic growth, low inflation, large stock market capitalization, and a less efficient local banking system. The latter result provides evidence in favor of the idea that foreign banks enter a given market not to follow their clients, but to

**FIGURE 10.4** Market Share of Foreign Banks in Latin America (Percent)



Source: Bank superintendencies.

take advantage of profit opportunities with local customers. This is also substantiated by the fact that foreign banks tend to enter markets characterized by fewer bank regulations and restrictions.<sup>5</sup>

### DO FOREIGN BANKS PLAY A USEFUL ROLE?

Financial liberalization and incentives to attract foreign banks are based on the premise that there are net gains from foreign entry in the domestic banking system. From a policy perspective, the most important question is whether foreign banks play a beneficial role in promoting financial development and stabilizing credit (hence, domestic governments should promote foreign entry) or have a less benign role by crowding out the domestic financial sector and accentuating international shocks (if this is the case, domestic governments should create obstacles to the entry of foreign banks).

Levine (1996) provides a conceptual framework to analyze the potential costs and benefits of foreign bank entry. On the benefits side, he emphasizes how foreign banks can play a useful role in promoting capital inflows and competition, and hence modernization and improvement in the efficiency of the financial system, and a regulatory framework that will ultimately benefit

<sup>5</sup> Studying the case of Argentina, Clarke and others (2000) show that foreign banks tend to specialize in certain geographic (Buenos Aires) and economic (lending to manufacturing and utilities) areas and suggest that these are the areas in which foreign banks located in Argentina have a comparative advantage.

**BOX 10.2 FOREIGN BANKS IN MEXICO**

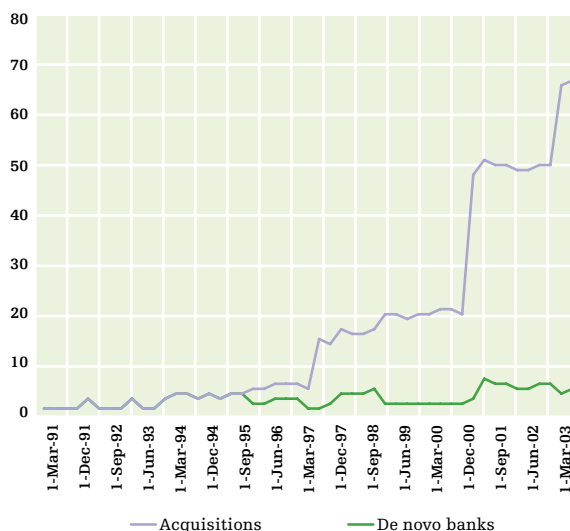
Mexico is a good example of the process of foreign banks entering the Latin American market. President José López Portillo expropriated and nationalized the country's banking system in 1982. Banks were subsequently privatized through auction to private investors in 1991. At the time of the privatization, it was made clear that foreign banks could play only a minor role in the Mexican banking system. In fact, the North American Free Trade Agreement stipulated that no single foreign bank could have controlling interest in any Mexican bank with a market share larger than 1.5 percent (Haber and Kantor 2003). The privatization was poorly managed, without any consideration for the banking experience of the acquiring investors, and with the unique objective of maximizing privatization revenues. Things soon turned sour, and owners of the privatized banks that could not recover their initial

investment started getting involved in very risky activities and then looting the banks' capital with related lending activities. That is, bankers started making loans to themselves or to their relatives or business associates (La Porta, López-de-Silanes, and Zamarripa 2003).<sup>1</sup>

The large fiscal cost of the bank bailout and the need to find funds to recapitalize the banking system forced the Mexican government to allow foreign investors to enter the banking system. At the beginning of 1997, foreign banks controlled less than 10 percent of total bank assets. The figure jumped to 14 percent in March 1997, 50 percent by the beginning of 2000, and nearly 70 percent by the end of 2003 (see the figure to the left). The three largest Mexican banks are now under complete control of foreign institutions. Bancomer is controlled by BBVA (a Spanish bank), Banamex by Citibank (a U.S. bank), and Serfin by HSBC (a British bank).

There is some evidence that the entry of foreign banks in the Mexican market led to an increase in efficiency and a lower share of nonperforming loans; Haber and Mustacchio (2004) show that foreign entry led to lower net financial margins. However, weak property rights still generate a situation in which intermediation margins tend to be high, and banks tend to make few loans and hold most of their assets in securities. Indeed, the situation seems to have deteriorated. In 1998, 72 percent of bank assets were loans; by 2003, the share of loans had dropped to 56 percent. The situation seems to be even worse for foreign-owned banks, for which the share of loans decreased from 76 to 52 percent (Haber and Kantor 2003).

**Foreign Bank Share in the Mexican Banking System, 1991–2002**  
(Percent)



Source: Haber and Kantor (2003).

<sup>1</sup> Related lending activities were amplified by the presence of de facto full deposit insurance.

Source: Based on Haber and Kantor (2003, Appendix 10.1).

the whole financial system and increase financial development. Although Levine suggests that the role of foreign banks in promoting capital inflows is relatively unimportant for a country's growth performance, he points out that foreign banks can play an important role in improving the functioning of the payments system;

introducing technological innovations, risk management, and monitoring techniques; expanding the mobilization of domestic savings; and improving resource allocation. He also suggests that the presence of foreign banks leads to better rating agencies and better disclosure requirements, leading to more information about

both firms and financial intermediaries. These benefits, together with a better regulatory environment and improved definition of property rights (also promoted by the presence of foreign banks), ultimately have a positive effect on a country's growth performance.

Potential concerns about the presence of foreign banks include the possibility that they will be the first to rush to the door in the face of a crisis and thus increase capital outflows, leading to procyclical lending and an increase in economic volatility (Galindo, Micco, and Powell 2003; Caballero 2002; Caballero, Cowan, and Kearns 2004). It has also been claimed that a widespread presence of foreign banks may crowd out the activities of domestic banks, which might be unable to compete for deposits against large international banks endowed with a better reputation (Stiglitz 1994). Under the assumption that foreign banks lend mainly to large firms, the crowding out of domestic banks could be problematic because it may lead to a reduction of total credit available to small and medium-size domestic firms. Stiglitz also suggests that the widespread presence of foreign banks may reduce the government's ability to steer the economy.

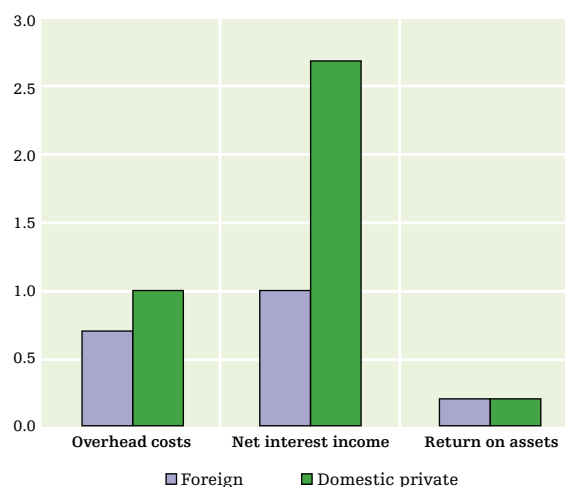
## FOREIGN BANKS AND EFFICIENCY

Levine (1996) claims that foreign bank entry should be associated with diffusion of new technologies, better resource allocation, and higher overall efficiency of the financial system. This claim can be broken down into two parts. The first part is that foreign banks are more efficient than their domestic counterparts; the second is that this greater efficiency is soon transferred (through competition and/or imitation) to the whole banking sector.

Studies focusing on developed countries show that foreign banks tend to be either less efficient than their domestic competitors or at least no more efficient (Hasan and Hunter 1996; Vander Venet 1996). The results tend to be different for developing countries. In this case, Claessens, Demirgüç-Kunt, and Huizinga (2001) find that foreign banks have higher profits (and higher overhead costs) and lower interest margins than their domestic counterparts.

Applying a statistical model that controls for bank size and the relative importance of demand deposits and interest income (which capture the type of activity in which the bank is involved and differentiate wholesale from retail institutions) shows that, in the case of Latin America, foreign banks tend to have lower overhead costs than their domestic competitors (Appendix

**FIGURE 10.5** Performance Indicators of Foreign and Domestic Private Banks  
(Percentage of total assets)



Source: IDB calculations.

10.1). The difference is about 30 percent, with median overhead costs (measured as a share of total assets) of about 1 percent for domestic private banks and 0.7 percent for foreign banks (Figure 10.5). Lower overhead costs allow foreign-owned banks to operate with lower net margins (net interest income over total assets) and to maintain levels of profitability that are similar to those of domestic banks. In particular, the median Latin American domestic private bank has a net interest income of 2.7 percent of assets, and the median foreign bank operating in Latin America has a net interest income of 1 percent; for both types of banks, average returns on assets hover around 0.2 percent. These averages mask some cross-country heterogeneity. Foreign-owned banks tend to have lower overhead costs in Argentina, Brazil, Chile, Colombia, Mexico, and Peru and higher costs in Bolivia and Guatemala. There are only two countries (Colombia and Honduras) in which foreign banks have higher net margins than their private domestic competitors.

Foreign-owned banks operating in Latin America are also characterized by better risk evaluation, but not necessarily by better risk management. In fact, although they have a lower share of nonperforming loans than their domestic private counterparts (5.6 versus 6 percent of loans), foreign-owned banks also have a lower level of provisioning measured in terms of either total loans or nonperforming loans. The median Latin American domestic private bank has loan provisions that are 48 percent of nonperforming loans and 2.5 percent of total loans; the values for the average foreign bank operating in Latin America are 39 and 1 percent, re-

spectively (Figure 10.6). Colombia is the only country where foreign banks have a higher share of provisions than domestic banks. These results partly agree with Levy-Yeyati and Micco's (2003) finding that foreign-owned banks operating in Latin America are more risky than domestic banks because foreign banks have higher leverage ratios and more variable returns.

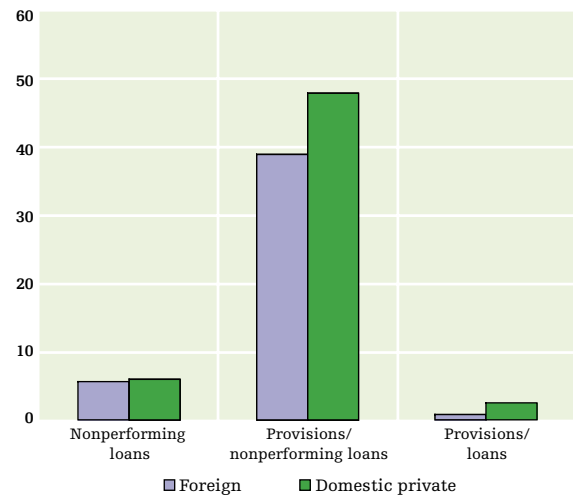
These findings provide evidence that foreign-owned banks tend to be more efficient and better managed than their domestic competitors in Latin America. However, they do not address whether the presence of foreign banks also leads to an increase in the efficiency of domestic banks and to an improvement in the overall financial system. In a cross-sectional study covering 7,900 banks in 80 developing and developed countries, Claessens, Demirgüç-Kunt, and Huizinga (2001) find that the presence of foreign banks is associated with a higher level of competition, which reduces the profitability and margins of domestic banks. However, in a study focusing on a panel of bank-level data for eight Latin American countries in 1996–2002, Levy-Yeyati and Micco (2003) find the opposite. In particular, their results show that increasing foreign presence is correlated with decreasing levels of competition and higher returns on equity. Interestingly, this increase in market power seems to have led to a reduction in the level of risk taken by domestic but not foreign banks.

### FOREIGN BANKS AND VOLATILITY

Do foreign-owned banks make domestic credit more stable or more volatile? An argument in favor of the idea that foreign-owned banks may stabilize domestic credit is that internationally active banks from developed countries, through their global reach, diversification, and access to a lender of last resort in the source country, may have lower default risk and lower funding costs and be less prone to depositor runs. However, foreign banks tend to have lower exit costs than domestic banks, and hence they may be more sensitive to shocks that affect the host country and, in times of crisis, they may simply pack up and leave.

Furthermore, foreign banks may import shocks from their home countries.<sup>6</sup> There is indeed some evidence that foreign-owned banks may transmit source country shocks to host countries. Peek and Rosengren (2000), for instance, show that the explosion of the Japanese real estate and equity bubble in the early 1990s led to a contraction of credit of Japanese banks in the United States. Goldberg (2001) shows that the U.S. economic cycle strongly influences the international

**FIGURE 10.6** Nonperforming Loans and Provisions (Percent)



Source: IDB calculations.

activities of banks headquartered in the United States. However, Goldberg (2001) shows that host country economic conditions do not influence the international activities of banks headquartered in the United States, contradicting the idea that foreign banks may leave in times of crisis.

Using a simple portfolio approach, Galindo, Micco, and Powell (2003) show that internationally diversified banks may be safer than domestic banks because the former can better take advantage of the law of large numbers to spread risk. However, when banks are more diversified across countries and suffer a shock to expected returns in the host country, they may cut back on local operations more rapidly than less diversified domestic banks. This result broadly suggests that the presence of international banks represents a trade-off for the host country. On the one hand, diversification of risk is likely to lead to safer banks and hence lower funding costs and, assuming the banking sector is competitive, a lower cost of credit. In addition, foreign banks' access to international credit lines makes them less sensitive to shocks to domestic deposits. On the other hand, characteristics that make foreign-owned banks more secure, such as access to foreign business opportunities, make their lending more sensitive to aggregate demand shocks in the domestic market, and this may increase the procyclicality of domestic credit.

<sup>6</sup> This is particularly a problem when most of the foreign-owned banks have their headquarters in the same country, which is indeed the case for Latin America; see Figures 10.2 and 10.3.

**TABLE 10.1** OPPORTUNITY AND LIQUIDITY SHOCKS AND FOREIGN BANKS

Aggregate credit growth	Aggregate credit growth less than aggregate deposit growth	Aggregate credit growth greater than aggregate deposit growth
Negative	Negative opportunity shock Credit growth of foreign banks < 0 (compared with domestic private banks)	Deposit crunch Credit growth of foreign banks > 0 (compared with domestic private banks)
Positive	Positive liquidity shock Credit growth of foreign banks < 0 (compared with domestic private banks)	Positive opportunity shock Credit growth of foreign banks > 0 (compared with domestic private banks)

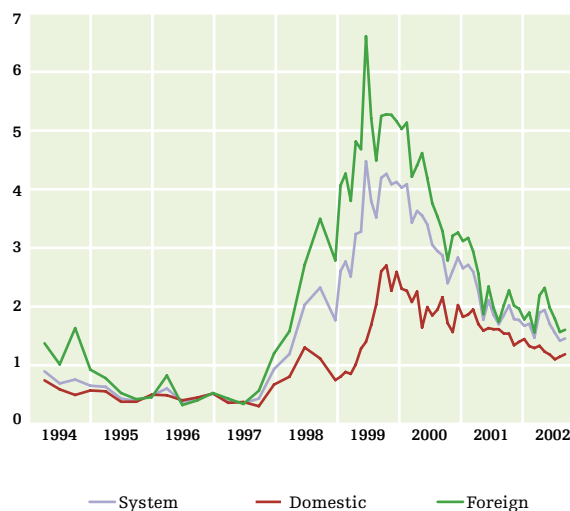
Source: IDB based on Galindo, Micco, and Powell (2003).

Following this line of reasoning, Galindo, Micco, and Powell (2003) focus on the following four states of the world (summarized in Table 10.1): (i) periods in which credit is decreasing and deposits are decreasing at a faster rate (deposit crunch); (ii) periods in which credit is decreasing and deposits are decreasing at a slower rate (negative opportunity shock); (iii) periods in which credit is growing and deposits are growing at a faster rate (positive liquidity shock); and (iv) periods in which credit is growing and deposits are growing at a slower rate (positive opportunity shock). They suggest that foreign bank credit should be higher than credit extended by domestic private banks when lending is constrained by deposit availability (that is, during deposit crunches and positive opportunity shocks).

The evidence discussed in Micco and Panizza (2004a) is consistent with the idea that foreign bank credit tends to be less procyclical than credit extended by private domestic banks and that its stabilizing effect comes mainly from less volatile deposits. Furthermore, Galindo, Micco, and Powell (2003) show that foreign banks tend to stabilize credit during deposit crunches but amplify the credit cycles driven by changes in business opportunities in the economy.<sup>7</sup> Anecdotal evidence also supports this view.

Figure 10.7 provides additional evidence in this direction. It shows the evolution of foreign assets, measured as a share of total assets, for domestic and foreign banks in Chile during the second half of the 1990s. After the fourth quarter of 1998, when the Chilean recession started, the banking sector as a whole increased its share of foreign assets, but the increase was substantially higher for foreign banks. During this period, total deposits in the Chilean banking system did not fall; therefore, it is plausible that the banks were mainly reacting to lower investment op-

**FIGURE 10.7** Foreign Assets/Total Assets of Banks in Chile, 1994–2002 (Percent)



Source: Caballero, Cowan, and Kearns (2004).

portunities and that this reaction was larger for foreign banks. In the case of Colombia, instead, total deposits dropped by approximately 10 percent between the end of 1997 and 2001. During the same period, total credit collapsed by more than 30 percent, but the drop in credit was larger in domestic than in foreign banks, increasing the market share of the latter (Figure 10.8) and suggesting that credit from foreign banks helped stabilize total deposits.<sup>8</sup>

<sup>7</sup> However, the effects are small.

<sup>8</sup> Arena, Reinhart, and Vásquez (2003) find that the presence of foreign-owned banks has no effect on the lending channel of monetary policy in developing countries.

## FOREIGN BANKS AND MARKET SEGMENTATION

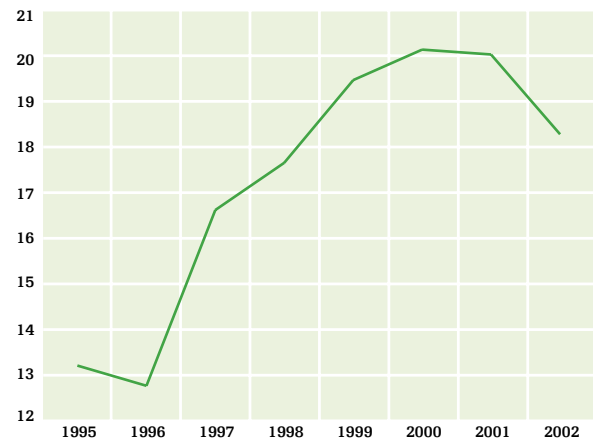
One source of concern regarding increased foreign bank penetration in developing countries is that their presence might reduce access to credit for some segments of the market, in particular small and medium firms that depend on bank financing. Given that international banks are large and organizationally complex financial institutions with limited knowledge of the host country market, they may find it difficult to lend to information-opaque small and medium firms.<sup>9</sup> In fact, small businesses tend to have exclusive dealings with a single bank with which they have developed an informal relationship that reduces asymmetric information. Large foreign banks could have difficulties developing these types of relationships.

Knowledge of the local culture may also be important. Evidence for Argentina shows that foreign-owned banks headquartered in other Latin American countries lend more to small and medium enterprises than foreign-owned banks with headquarters outside the region. This suggests that their superior knowledge of the culture and the economy may give them a comparative advantage (*vis-à-vis* other foreign-owned banks) in dealing with small firms (Berger, Klapper, and Udell 2001). It should be pointed out, however, that although large foreign banks are unlikely to replicate the lending method of small domestic banks, they can bring technological innovations (for example, new credit-scoring methodologies) that can foster credit for small and medium firms.<sup>10</sup>

Empirical evidence of the impact of foreign banks on the amount of credit going to small businesses in developing countries is scarce and inconclusive. Some studies for Argentina show that foreign bank participation is associated with an increase in total lending, but also a reduction in the share of bank lending to small firms (from around 20 to 16 percent of total lending in 1996–98).<sup>11</sup> Clarke and others (2000) analyze the behavior of foreign banks in four Latin American countries (Argentina, Chile, Colombia, and Peru) and find that foreign banks in these countries lend less to small businesses than private domestic banks do. However, these results are mostly driven by the behavior of small foreign banks (in all four countries, they lend less to small businesses than domestic banks of similar size do). The opposite is true for medium and large foreign institutions in Chile and Colombia, but not in Argentina and Peru.

In Argentina and Chile (the two countries where the financial sector developed most during the studied

**FIGURE 10.8** Market Share of Foreign Banks in Colombia, 1995–2002 (Percent)



Source: Bank superintendency.

period), lending to small businesses by medium and large foreign banks grew faster than lending to this sector by domestic banks. The authors speculate that the institutional environments in Argentina and Chile allowed large foreign banks to use scoring methodologies to increase their lending to small and medium firms.

Does the presence of foreign-owned banks affect overall credit availability for small firms?<sup>12</sup> Using information for around 70 developing countries, the statistical analysis reported in Table 10.2 shows that, compared with medium and large firms, small firms are

<sup>9</sup> Goldberg and Zimmerman (1992) show that foreign banks in the United States tend to lend to large firms. Berger and Udell (1995) discuss the relationship between large banks and credit for small and medium firms.

<sup>10</sup> Mester (1997) argues that there could be a U-shaped relation between bank size and lending to small firms. On the one extreme, small domestic banks use relationship lending; at the other extreme, large banks use more standardized products (based on credit scoring) to extend credit to small businesses (in fact, large institutions often manage the bulk of consumer credit).

<sup>11</sup> During the same period, foreign banks increased both their propensity to lend to small and medium enterprises and their market share in this sector.

<sup>12</sup> Data on access to credit for small and medium enterprises are from the World Business Environment Survey (WBES) database. The WBES is a cross-country, firm-level survey conducted in 54 developed and developing countries in 1999. The survey includes information on firm characteristics as well as entrepreneurs' perceptions of several issues, including access to financial markets and bank credit.

**TABLE 10.2** FOREIGN BANKS AND ACCESS TO CREDIT FOR SMALL AND MEDIUM-SIZE ENTERPRISES

Variable	1	2	3
Small	-7.792 (0.877)***	-8.579 (0.859)***	-8.126 (0.818)***
Small * FD	0.109 (0.024)***	0.163 (0.029)***	0.171 (0.028)***
Small * FD * PUB	-0.039 (0.102)		-0.15 (0.099)
Small * FD * FOR		-0.28 (0.092)***	-0.322 (0.090)***
Observations	74	72	70
Countries	37	36	35
Country fixed effect	Yes	Yes	Yes

\* Significant at 10 percent.

\*\* Significant at 5 percent.

\*\*\* Significant at 1 percent.

*Note:* The dependent variable is the share of financing from banks. FD denotes financial development (credit to the private sector over GDP); FOR denotes the share of foreign banks' assets; and PUB denotes the share of commercial public banks' assets. Standard errors are in parentheses.

*Source:* IDB calculations.

able to finance about 8 percent less of their total investment with credit from the banking industry.<sup>13</sup> The table shows that the gap between small firms and the rest of the economy is smaller in countries with a larger financial sector.<sup>14</sup> The point estimates imply that moving from a country with a very small financial system (10 percent share of credit in GDP) to a country with an average level of financial development (40 percent share of credit in GDP) reduces the gap in bank financing for small firms by 3 percentage points. Table 10.2 shows that there is no statistically significant difference in access to bank credit for small firms in countries with high and low state ownership of banks. However, the presence of foreign-owned banks increases the difference in access to bank credit between small firms and medium and large firms.

It is important to note that the results discussed here focus on how the presence of foreign-owned banks affects access to credit for small firms relative to medium and large firms. Hence, these findings do not necessarily mean that the presence of foreign banks reduces small firms' access to the banking industry. It could be the case that foreign bank entry increases total credit, but that this increase is larger for large firms (Martínez Pería, Powell, and Hollar 2002).

## CONCLUSIONS

The past decade has witnessed an exponential increase in the presence of foreign banks in Latin American countries. This trend presents both opportunities in terms of modernization of the region's banking system and challenges in terms of possible additional volatility and less access to credit for small firms. However, the empirical evidence seems to show that the benefits of foreign bank entry greatly outweigh its potential costs. In particular, foreign entry has been associated with greater efficiency and less instability after deposit shocks (except in major crisis episodes in which all banks suffer equally), but with more instability after idiosyncratic business opportunity shocks. The evidence is still inconclusive regarding the effect of foreign bank presence on lending to small enterprises.

<sup>13</sup> This effect is measured by a dummy variable that takes the value 1 for small firms. Medium and large firms are the excluded group. Firms with fewer than 50 employees are small; firms with more than 50 but fewer than 500 are medium, and firms with more than 500 are large.

<sup>14</sup> This effect is captured by the interaction between the dummy for small firms and a variable measuring financial development.

## APPENDIX 10.1 BANK OWNERSHIP, PERFORMANCE, AND RISK

Appendix Table 10.1 presents the results of estimations of how bank ownership affects bank performance, which is measured as the ratio of overhead costs to assets, net income relative to total assets, and the return on assets. The regressions were performed on a sample that includes banks in all countries for which data are available (Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, and Peru) and on a subsample that only includes banks in Argentina, Brazil, Chile, Colombia, Costa Rica, El Salvador, Mexico, and Peru. All regressions are estimated using weighted least squares (WLS), in which each observation is weighted by the bank's asset share. (For a discussion of why WLS is preferable to ordinary least squares, see Levy-Yeyati and Micco 2003.)

In order to control for the effect of bank size on performance, the regressions control for the log of total assets. The results show that size is negatively correlated with overhead costs and net income and positively correlated with return on assets. Controlling for

the share of demand deposits in total income is a crude way to differentiate banks that have a large retail network (and hence should have more demand deposits) from banks that have wholesale activity. As might be expected, banks with a large share of demand deposits tend to have greater overhead costs. In addition, there is a negative correlation between the share of demand deposits and net income, and an unclear correlation between the share of demand deposits and the return on assets. Finally, controlling for the share of interest income in total income, the presumption is that banks with a lower share of interest income are more involved in providing services to their customers; thus they may have different levels of overhead costs. The estimations show that the share of interest income is positively correlated with overhead costs and net income and is not significantly correlated with the return on assets.

Controlling for bank ownership, the variables of interest are PUB (a dummy variable that takes the value 1 if more than 50 percent of a given bank is state-owned) and FOB (a dummy variable that takes the value 1 if more than 50 percent of a given bank is foreign-owned). Domestic private ownership is the omitted

**APPENDIX TABLE 10.1** | BANK OWNERSHIP AND PERFORMANCE

Independent variable	Dependent variable					
	Overhead costs		Net income		Return on assets	
	1	2	3	4	5	6
PUB (dummy)	0.003 (0.000)***	0.002 (0.000)***	0.003 (0.001)**	0.005 (0.002)***	-0.004 (0.000)***	-0.003 (0.000)***
FOB (dummy)	-0.001 (0.000)***	-0.001 (0.000)***	-0.003 (0.001)***	-0.003 (0.002)**	0.000 (0.000)	0.000 (0.000)
Assets (log)	-0.001 (0.000)***	-0.002 (0.000)***	-0.002 (0.000)***	-0.001 (0.000)***	0.001 (0.000)***	0.000 (0.000)***
Demand deposits/ total income	0.01 (0.001)***	0.018 (0.001)***	-0.025 (0.004)***	-0.033 (0.007)***	0.003 (0.001)**	-0.003 (0.002)
Interest income share	0.001 (0.000)***	0.001 (0.000)***	0.031 (0.009)***	0.037 (0.014)***	0.000 (0.000)	0.001 (0.001)
Observations	14,055	11,410	14,066	11,474	14,171	11,540
R <sup>2</sup>	0.55	0.53	0.34	0.30	0.14	0.12
Sample	All countries	Subsample <sup>a</sup>	All countries	Subsample <sup>a</sup>	All countries	Subsample <sup>a</sup>

\*\* Significant at 5 percent.

\*\*\* Significant at 1 percent.

<sup>a</sup> The subsample includes Argentina, Brazil, Chile, Colombia, Costa Rica, El Salvador, Mexico, and Peru.

*Note:* See appendix text for variable definitions. Robust standard errors in parentheses, country-year fixed effects.

*Source:* IDB calculations.

**APPENDIX TABLE 10.2** | **BANK OWNERSHIP, NONPERFORMING LOANS, AND PROVISIONS**

Independent variable	Dependent variable					
	Nonperforming loans		Provisions/ nonperforming loans		Provisions/loans	
	1	2	3	4	5	6
PUB	0.104 (0.006)***	0.086 (0.007)***	-0.056 (0.024)**	-0.128 (0.035)**	0.021 (0.003)***	0.021 (0.003)***
FOB	0.004 (0.002)*	0.001 (0.002)	-0.089 (0.020)***	-0.145 (0.023)***	-0.017 (0.002)***	-0.018 (0.002)***
Assets (log)	-0.011 (0.001)***	-0.006 (0.001)***	-0.021 (0.007)***	-0.007 (0.010)***	-0.004 (0.001)***	-0.003 (0.001)***
Z index (ln)					-0.017 (0.002)***	-0.014 (0.001)***
Observations	7,303	4,381	7,232	4,372	7,441	6,129
R <sup>2</sup>	0.40	0.51	0.00	0.00	0.40	0.50
Sample	All countries	Subsample <sup>a</sup>	All countries	Subsample <sup>a</sup>	All countries	Subsample <sup>a</sup>

\* Significant at 10 percent.  
\*\* Significant at 5 percent.  
\*\*\* Significant at 1 percent.  
<sup>a</sup> The subsample includes Argentina, Brazil, Chile, Colombia, Costa Rica, El Salvador, Mexico, and Peru.  
*Note:* See appendix text for variable definitions. Robust standard errors in parentheses, country-year fixed effects.  
*Source:* IDB calculations.

dummy. The regression results show that, compared with domestic private banks, state-owned banks have greater overhead costs and net income and lower returns on assets. In terms of the sample, the median domestic private bank has overhead costs and net income equal to 1 and 2.7 percent of total assets, respectively. The values are 1.6 and 2 percent, respectively, for public banks. Foreign-owned banks tend to have lower overhead costs (the median value in the sample is 0.7 percent) and lower margins (the median value is 1 percent). The return on assets is not significantly different for foreign-owned banks compared with private domestic banks.

Appendix Table 10.2 presents the results of estimations of the relationship between bank ownership and risk—in particular, how bank ownership affects the share of nonperforming loans and provisions toward nonperforming loans. (As before, the regressions were estimated using WLS.) The regressions control for bank size (measured by the log of assets) and include an index (the Z index) that focuses on return volatility and leverage to proxy for the probability that the banks will go bankrupt.

The results suggest that larger banks are characterized by a smaller share of nonperforming loans. The effect on provisions is not clear. If provisions are measured as a share of nonperforming loans, large banks have more provisions. If provisions are measured as a share of total loans, large banks have fewer provisions. The Z index is negatively correlated with provisions.

Concerning ownership, the estimations indicate that state-owned banks are characterized by a large share of nonperforming loans and limited provisions for these bad loans (although public banks have higher provisions in terms of total loans). The median domestic private bank has nonperforming loans equivalent to 6 percent of total loans; the median public bank has 16 percent. Foreign banks have fewer nonperforming loans than domestic private banks, but the difference is less than half a percentage point. At the same time, foreign-owned banks tend to have fewer provisions, expressed both as a share of nonperforming loans and as a share of total loans (although in the former case, the difference compared with private domestic banks is not statistically significant).

