Global Banks, Local Crises: Bad News from Argentina

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Imagine a world where your favorite bank is like Starbucks: you can find a branch at every corner, in every city on the globe. Imagine a world where in emerging markets all banks are international because local banks have either disappeared or been bought out. The world just described is not as distant from reality as one might think, especially in the Americas. Nearly everywhere you go in Latin America, from San Luis Potosí in Mexico to Santiago in Chile, Citibank has an office (see Chart 1). In the last few years, large U.S. and European banks have expanded their presence in several Latin American countries at a staggering pace to the extent that today in some countries they own or control the majority of the domestic banking system.

In the past few decades, banking crises have been a recurrent phenomenon in Latin America.[1] Some have argued that the internationalization of the banking sector has ushered in a new era. A November 2001 report by Salomon Smith Barney states that "One of the main benefits that the presence of foreign banks in Latin America should produce is the overall decline in systemic risk. . . . We believe systemic risk in the [Argentine] banking system (one that caused the collapse of the system of payments) is low, as 43% of its equity is controlled by foreigners"(23). The rationale for this optimism is as follows. When an intermediation sector is purely domestic, any financial crisis, major currency depreciation, or government bankruptcy is a systemic shock that could cause the collapse of the entire system. The fact that international banks now own or control a sizable fraction of local banking systems, the reasoning goes, has changed the picture considerably. Some international banks hold such a large and internationally diversified portfolio of assets that a country-specific shock in a small economy, like Argentina, should not be able to endanger their financial health. Hence, what used to be systemic risk from the perspective of local banks with undiversified portfolios might no longer be systemic from the standpoint of large international banks. In economic terms, Argentina is about the size of Connecticut. Given the size and resources of a typical large international bank, a crisis in a country like Argentina could be overcome by such a bank—or so the reasoning went.

This scenario, if true, would be very good news for depositors in emerging markets. While in the United States deposit insurance shields depositors from the risk of bank insolvency, in some emerging markets there is no deposit insurance at all.[2] In others, like Argentina, its scope and resources are limited.[3] This lack or limitation of deposit insurance in emerging markets means that a shock to the asset side of a bank often translates into a shock to the liability side: Depositors bear at least some of the brunt of bank insolvency, especially when it is systemic. In this light, the international diversification

CHART 1

Citibank Branches in the Western Hemisphere

Source: Citibank <www.citibank.com> (March 2002)

of foreign banks' assets is an attractive feature for depositors in emerging markets because it reduces the portfolio exposure to country-specific shocks and hence makes deposit safer.

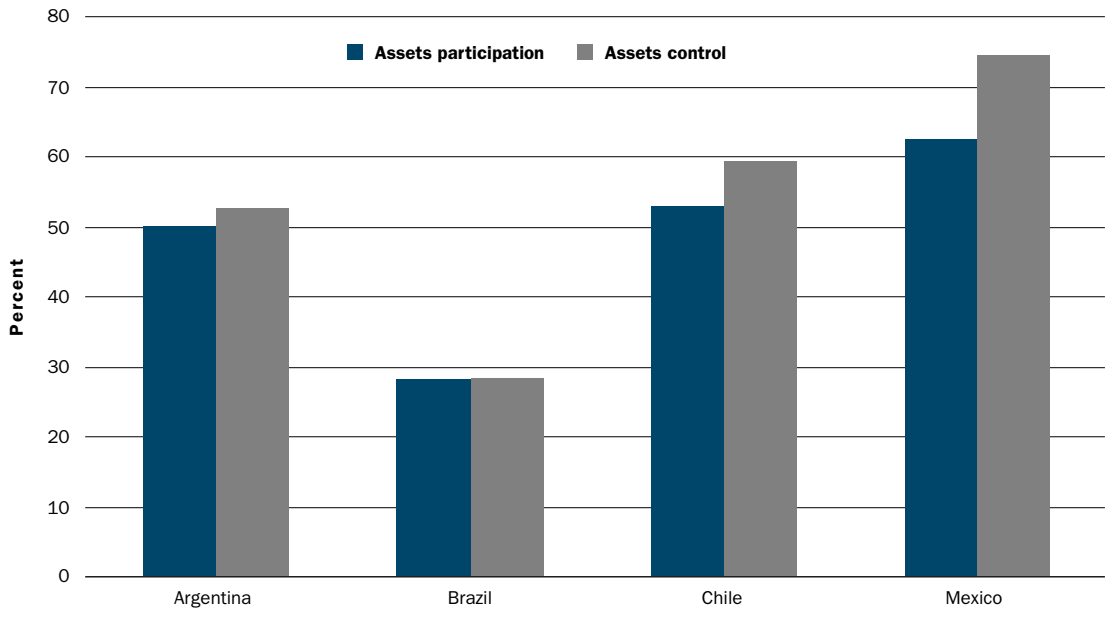
Yet Argentina's experience shows that the presence of international banks was not enough to prevent local banking crises and sizable losses to depositors. Specifically, the point of this article is as follows: The "bad news" from Argentina is that depositors in emerging markets may not reap the full benefits of international portfolio diversification. The article argues that depositors may not reap the full benefits because international banks have limited liability, at least under some circumstances—for instance, whenever the local government heavily intervenes in the banking system. Hence, there is a key difference between a crisis in, say, Connecticut and a crisis in Argentina. If the branch of any bank in Connecticut is producing heavy losses, for example, the U.S. regulator will not simply liquidate the branch and let the parent company—that is, the bank—forfeit its obligations to the depositors at that branch. The parent company has no choice but to face its liabilities, at least to the extent that the bank as a whole is solvent. If the same events occur at the bank's branch in Argentina, however, the bank can conceivably refuse to shore up the local branch—or at least threaten to do so—even if the parent company as a whole has enough liquidity to withstand the crisis.[4] Because of this limited-liability feature, the Argentine branches or subsidiaries of international banks may face the crisis as stand-alone entities. And while the parent company's portfolio is highly diversified internationally, the branch's or subsidiary's portfolio often is not.[5]

Given the sensitive nature of this topic, it is important that the message of this article is not misunderstood. The article does not argue that the presence of international banks is detrimental to emerging markets. On the contrary, there is substantial evidence that opening the banking system to foreign banks is beneficial to emerging markets from all points of view, including macroeconomic stability. Also, the article does not argue that the limited-liability feature itself is detrimental for emerging markets. While the limited-liability feature of international banks may seem bad ex post—and, of course, it is from the perspective of Argentine depositors—this feature may well be desirable, perhaps even necessary, ex ante. Indeed, the earlier analogy comparing a crisis in Connecticut and one in Argentina needs at least one important qualification. In the unlikely event that the State of Connecticut were to implement some of the actions taken by the Argentine government—such as forced conversion of dollar-denominated bank assets into pesos at a less-than-market rate or limitations on holdings of dollar-denominated assets—the banks could certainly challenge those actions in a federal court.[6] International banks do not have this option in the Argentine case. Hence, the limited-liability feature is needed to protect banks from foreign governments' actions; in the absence of limited liability, the incentive for foreign government to (implicitly or explicitly) expropriate the assets of international banks would be too high. Although this article does not study the welfare implications of this limited-liability feature, the concluding section offers some further thoughts on the issue. In particular, it argues that the limited-liability feature may also create perverse incentives for international banks to the extent that local depositors are not fully aware of it.

This article first presents some evidence of the globalization of the banking sector in Latin America,

CHART 2

Foreign Banks' Participation and Control as a Percentage of Total Sector Assets, November 2001



Source: Salomon Smith Barney (2001)

documenting the dramatic increase of the phenomenon in the late nineties. The discussion also demonstrates that the involvement of international banks in any country has often been very large relative to the size of the banking sector in that specific country but relatively small in comparison to the overall size of the international bank. The article then reviews the literature on the pros and cons of international banks in emerging markets, specifically in Latin America. The discussion focuses on the literature that addresses the question, Does the presence of foreign financial institutions enhance or reduce the stability of the domestic banking system? The study then examines the legal issues that are behind the limited-liability feature. Indeed, the institutional information in this section, which is sometimes neglected by the literature, is the main value added of this article. Finally, the article addresses the "bad news" from Argentina and discusses some implications of this phenomenon.

International Banks in Latin America: Some Facts

In the largest Latin American countries a sizable portion of the banking sector is, directly or indirectly, in the hands of international financial institutions. Chart 2 shows the percentage of assets controlled by foreign banks in the four largest Latin American banking systems. The definition of "control" is the same used in the report by Salomon

1. Since 1980, Argentina alone has suffered two banking crises, in 1980–82 and 1989–90 (see Caprio and Klingebiel 1996).
2. In the United States the Federal Deposit Insurance Corporation (FDIC) covers deposits up to $100,000. Before the FDIC Improvement Act (FDICIA) of 1991, essentially all creditors of large banks were covered by the FDIC. FDICIA substantially limits this coverage (see Wall 1993).
3. Kane and Demirgüc-Kunt (2001) document that deposit insurance has become very popular of late in emerging markets: In the past fifteen years the fraction of countries offering deposit insurance has increased from about 30 percent to 70 percent. The remainder of the paper provides further details on the deposit insurance scheme in Argentina.
4. Of course, international banks can close their operations in emerging markets at will, but the point addressed in the article is the circumstances under which international banks have limited liability.
5. Some argue that this lack of diversification was partly due to the Argentine government's forcing banks to hold government paper.
6. In 1933 the federal government actually implemented both actions: It suspended the gold clauses (which tied the value of certain assets to gold) and forced all private parties to hand all gold (coins, bullions, and certificates) to the federal government. Those actions were challenged in federal courts and finally in the Supreme Court. In all (four) cases, the Supreme Court sided with the federal government (Kroszner 1999).

TABLE 1

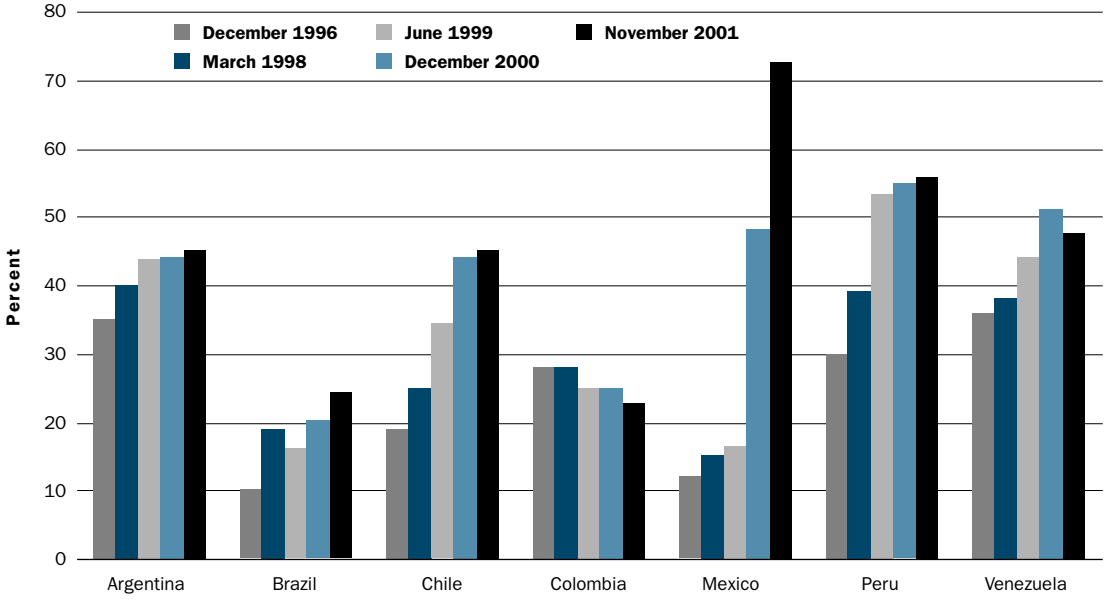
Foreign Participation and Control of Loans, Deposits, and Equity, November 2001

	Loans control	Loans participation	Deposits control	Deposits participation	Equity control	Equity participation
Argentina	46.5	44.2	46.4	43.3	43.1	40.5
Brazil	24.4	24.6	16.3	16.5	30.1	29.8
Chile	44.9	36.0	44.5	36.4	54.1	46.4
Mexico	72.9	57.7	76.2	60.7	74.8	61.1

Note: All figures are percentages. November participation is applied to June 2001 figures.
Source: Salomon Smith Barney (2001)

CHART 3

Foreign Control of Total Loans



Source: Salomon Smith Barney

Smith Barney from which the data were taken: An international bank controls a domestic bank if its stake in the domestic bank is at least 40 percent.[7] The chart shows that foreign banks control almost a third of banking sector assets in Brazil, the largest Latin American economy. In the second-largest economy, Mexico, the figure rises to a staggering three-quarters. In the third- and fourth-largest economies (in financial terms), Argentina and Chile, foreign banks control 53 percent and 59 percent of total assets, respectively. The numbers for the share of assets owned by international banks ("participation") are lower, but not very much so, suggesting that international financial institutions usually own large stakes in the banks they control.

Table 1 looks at other measures of international banks' involvement in Latin America, particularly the share of loans, deposits, and equity either controlled or owned by foreign financial institutions in the four largest Latin American countries. In Brazil international banks control a quarter of loans, 16 percent of deposits, and 30 percent of equity. The corresponding figures for Mexico are 73 percent, 76 percent, and 75 percent. For Argentina and Chile these figures are approximately 40 percent to 50 percent. The table clearly shows that, no matter how one measures it, the presence of international banks in Latin America is large.[8]

The picture just described would have been almost unthinkable a decade ago. Chart 3 shows the

dramatic expansion of foreign control of total loans in the banking sector from December 1996 to November 2001. Foreign control over loans increased by 30 percent in Argentina, more than doubled in both Brazil and Chile, and increased sixfold in Mexico. Table 2, which lists foreign control of total assets in the banking sector in 1994, 1999, and 2001, also shows how rapidly foreign control evolved in the 1990s. Foreign control of assets in Mexico evolved from 1 percent in 1994 to 45 percent in 2001.[9] In Argentina, Brazil, and Chile, foreign control of total assets tripled during that period.

TABLE 2

Foreign Control of Total Assets, 1994–2001

	1994	1999	2001
Argentina	17.9	48.6	53.1
Brazil	8.4	16.8	27.0
Chile	16.3	53.6	48.0
Mexico	1.0	18.8	45.4

Note: Control is defined as a 50 percent stake.
Source: IMF, Salomon Smith Barney, authors' calculations

Explaining this dramatic increase in foreign banks' presence in Latin America goes beyond the scope of this article. According to the literature (Clarke and others 2000; Clarke and others 2001; Barajas, Steiner, and Salazar 2000; Demirgüc-Kunt and Huizinga 2000), one reason for this increase seems to be that domestic banks were not very efficient, at least relative to foreign banks. Since competition from local banks in emerging markets is often not as stiff as competition at home, for many U.S. and European banks the Latin American market opens profit opportunities in the provision of financial services. In some countries, the increase in economic integration between the home country and the host country also prompted those international banks that wanted to "follow their clients" to expand their role in Latin America. For instance, since the beginning of the North American Free Trade Agreement (NAFTA) in 1994, economic integration between the United States and Mexico has increased dramatically. Changes in regulations have also played a major role. In Mexico, before NAFTA, Citibank was the only international bank permitted to conduct (limited) banking operations. Until December 1998 regulations prohibited foreign control of Mexico's three largest banks, which account for about 60 percent of loan market share. The lifting of those restrictions prompted a dramatic expansion of foreign banks' role in Mexico.

Finally, financial crises themselves contributed to the increasing presence of international financial institutions in Latin America (see Peek and Rosengren 2000b). In the aftermath of the Mexican crisis, for instance, the government was very eager to sell the banks it had just rescued. International banks were an important source of new capital for a banking sector that desperately needed a capital infusion. The same situation occurred in Argentina in the aftermath of the Tequila Crisis.

Which international banks are the biggest players in the Latin American arena? For each of the largest eight financial institutions involved in Latin America, Table 3 shows the amount of loans made by banks controlled by these institutions and these loans as a percentage of total loans. Three of the banks shown in the table are a notch above all others in terms of involvement in Latin America: two Spanish banks, BBVA and Santander Central Hispano (SCH), and a U.S. financial institution, Citigroup.

How large a stake do international banks have in Latin America? Table 4 lists the amount of loans that the three major players control in the four largest banking sectors in the region.[10] The table indicates that loans made to these four countries represent a sizable portion of the loan portfolio of these banks. For Citigroup this share is roughly 9 percent. For the two Spanish banks the figure is even

7. If a 50 percent threshold is used the figures do not change substantially, with the exception of Mexico, where the Spanish bank Banco Bilbao Vizcaya Argentaria (BBVA) owns 49 percent of BBVA Bancomer.
8. Peek and Rosengren (2000b) argue that all these measures grossly underestimate the importance of international banks for lending to Latin America. The asset and loan measures include subsidiaries and branches of international banks that operate in the host countries but neglect offshore lending. Peek and Rosengren show that until 1997 the latter component was more important than the former for Argentina, Brazil, and Mexico.
9. In this case, control is defined as at least a 50 percent stake. This definition excludes Mexico's largest bank, BBVA Bancomer, of which the Spanish bank BBVA owns a 49 percent stake. If the lower 40 percent threshold is used, foreign control of total assets would be 73 percent.
10. Again, these figures actually underestimate the exposure of international banks because they do not include offshore lending (Peek and Rosengren 2000b). One should also be careful in interpreting these figures as appropriate measures of risk, which is more properly computed from the exposure in relation to the parent bank's capital or equity rather than the overall asset position (see Goldberg 2001).

TABLE 3

Top Eight Foreign Banks in Argentina, Brazil, Chile, and Mexico, 2001[a]

Bank	In U.S.$ billions	As a percent of total loans
Banco Bilbao Vizcaya Argentaria (Spain)	36.6	11.5
Santander Central Hispano (Spain)	34.5	10.8
Citibank (U.S.)	34.8	10.9
FleetBoston (U.S.)	9.2	2.9
HSBC (U.K.)	5.1	1.6
ABN Amro (Netherlands)	4.5	1.4
Scotiabank (Canada)	4.1	1.3
Sudameris (France/Italy)	3.7	1.2

[a] As a percentage of total loans controlled
Source: Salomon Smith Barney

TABLE 4

The Largest Three Foreign Banks' Loans to Argentina, Brazil, Mexico, and Chile

Bank	Net loans	Loans to top four banking sectors	As % of net loans	Loans to Argentina	As % of net loans	Loans to Brazil	As % of net loans	Loans to Mexico	As % of net loans	Loans to Chile	As % of net loans
SCH	154.9	34.3	22.1	6.5	4.2	2.4	1.6	14	9.1	11.4	7.4
Citigroup	381.8	34.6	9.1	4.7	1.2	3.3	0.9	25	6.6	1.6	0.4
BBVA	133.9	36.7	27.4	5.0	3.7	1.2	0.9	28	20.9	2.5	1.9

Note: In billions of U.S. dollars and as a percentage of total loans. Loans are shown in billions of U.S. dollars. Net loans are total loans less loan loss reserves as of year-end 2001. Country loans are as of November 2001.
Source: Dow Jones Interactive, Salomon Smith Barney

larger, about 22 percent for SCH and 29 percent for BBVA. On the one hand, these numbers suggest that these banks, especially SCH and BBVA, could be severely affected by a systemic crisis in Latin America as a whole. On the other hand, if one focuses on any specific country, one finds that, with the exception of Mexico, the exposure of these banks is relatively small. For Argentina the share of net loans is around 4 percent for the two Spanish banks and a mere 1.2 percent for Citigroup. In Mexico, by contrast, international banks have quite a bit at stake: 6.6 percent of Citigroup's net loans, 9.1 percent of SCH's net loans, and 20.9 percent of BBVA's net loans.

Foreign Banks and Domestic Crises: What Do We Know?

The literature on international banks in Latin America (and elsewhere) is relatively recent, just like the phenomenon it studies. The literature can best be understood within the context of the policy questions faced by decision makers in Latin America and other developing countries: Should we allow entry to foreign banks? What are the gains? What are the potential risks? Box 1 offers a brief review of the literature. This review focuses on the evidence the literature has gathered on the narrower questions, Does the presence of foreign financial institutions enhance or reduce the stability of the domestic banking system? What are foreign banks going to do in time of crisis? Given the apparently endemic instability of Latin American economies, these are key questions policymakers face. Opponents of foreign bank entry claim that in a crisis international banks will abandon—"Vive les rats!"—the domestic economy to its destiny. Proponents argue that, on the contrary, global banks will provide stability to the domestic financial sector since they are less affected by shocks that are idiosyncratic to the host country.

In principle, the presence of foreign banks has two contrasting effects on the stability of domestic bank-

BOX 1

International Banks in Latin America: The Literature

The literature on international banks in Latin America can be best understood within the context of the policy questions faced by decision makers in Latin America and other developing countries: Should we allow entry to foreign banks? What are the gains? What are the potential risks?[1]

One of the main benefits related to the entry of foreign banks is the increased efficiency of the financial system. On this point, the literature strongly suggests that efficiency increases following foreign banks' entry into developing countries.[2] For one thing, banks that expand abroad are typically the "best of the crop" in the country of origin (Focarelli and Pozzolo 2000). Hence, they are likely to export improved management and information technology practices to the host country. Second, the literature finds that foreign banks are generally more efficient than domestic competitors (Barajas, Steiner, and Salazar 2000; Clarke and others 2000). Third, a number of studies find that foreign bank entry has been associated with increased efficiency of domestic financial intermediaries (see Claessens, Demirgüc-Kunt, and Huizinga 1998; Clarke and others 2000).

The payoff from increased efficiency can be very large. Levine (2001) argues that there is substantial empirical evidence supporting the following causal chain: first, foreign bank entry enhances the efficiency of the banking sector; second, efficiency in the intermediation sector spurs growth by boosting productivity.

Opponents of financial openness, however, emphasize the other side if the coin. By squeezing the interest margins and profitability of domestic banks, the entry of foreign banks may push local intermediaries out of the market. This reasoning implies that entire sectors that were previously dependent on local banks—small firms, for instance—may find themselves without access to credit, with detrimental consequences for the economy. The evidence on whether these consequences actually ensue in countries with extensive foreign bank presence is inconclusive. The literature finds that small businesses are indeed less likely than larger ones to receive credit from foreign banks (Berger, Klapper, and Udell 2000; Clarke and others 2002). After the size of the banks in the sample is controlled for, however, the negative relationship between foreign ownership and lending to small businesses tends to disappear, if not to be reversed. A different but related argument brought forward by opponents of foreign banks' entry is that these banks tend to "cherry-pick" their customers, leaving domestic banks with a worse pool of potential creditors than before. There is little evidence supporting this point, however, and the existing evidence points in the opposite direction (Crystal, Dages, and Goldberg 2001).

The multitude of banking crises during the last two decades point to the weaknesses of the regulatory and supervisory environment in many emerging markets. Disclosure standards are also inferior in developed countries, especially to standards in the United States. Proponents of financial openness argue that, by allowing foreign bank entry, emerging markets indirectly benefit from the more advanced supervisory and disclosure environment in the country of origin (see Peek and Rosengren 2000b). Opponents of financial openness counter that foreign bank entry leaves the domestic regulator in a weaker position than before. For one thing, the regulator's ability to exercise moral suasion is lessened. In addition, foreign banks may be more responsive to changes in regulations at home than in the host country (Peek and Rosengren 2000b). Specifically, regulatory changes in the country of origin may affect lending in the host country.

1. An exhaustive review of the literature so far can be found in Clarke and others (2001).
2. This evidence for developing countries is in contrast to that found for developed countries, in particular for the United States (see, for instance, Hasan and Hunter 1996).

ing systems (leaving aside the issue of limited-liability, which will be discussed later). On the one hand, the portfolio diversification of global banks makes the domestic financial system less fragile with respect to domestic shocks. On the other hand, their presence means that the host country may become more exposed to external shocks—more specifically to shocks that affect the country of origin of the banks.

Global banks are generally larger, and have a more diversified portfolio of assets, than local

banks.[11] The international portfolio diversification of global banks is advantageous for the host country's financial system both ex post, in the event of a crisis, and ex ante. If a crisis occurs, global banks are likely to have both less portfolio exposure to the domestic economy and greater access to liquidity than local banks do. Ex ante, according to standard portfolio theory, the presence of international banks may imply that the interest rate paid on loans by domestic firms is lower, other things being equal, than when only local banks are present. Since local banks have all their eggs in the same basket, they are willing to add one more egg to that same basket only if the price is high enough to compensate them for the additional risk they are undertaking. Global banks have their eggs in many baskets. Hence, the additional risk undertaken by international banks of putting one more egg in the Argentine basket is lower than that undertaken by an Argentine bank, so the international banks might be willing to demand a lower return. In equilibrium, depending on the market structure of the banking system, this willingness to demand a lower return may translate into a lower cost of capital for domestic firms.

Foreign banks' entry can in principle have two contrasting effects on the domestic financial system—diminished sensitivity to domestic shocks and higher exposure to shocks in the international banks' country of origin.

In a nutshell, whenever the banking system is closed, country-specific shocks are necessarily systemic and hence may threaten the stability of the system. From the perspective of international banks, however, those very same shocks are idiosyncratic. Hence, the entry of international banks makes the domestic financial system less fragile with respect to domestic shocks.[12] An important corollary of this point is the following: The high volatility of Latin American economies is not at all an obstacle to the expansion of international banks, at least to the extent that this volatility is idiosyncratic.[13] On the contrary, the higher the volatility is, the higher the relative advantage of foreign versus domestic banks.

The discussion now turns to the second question: Does the presence of foreign banks mean that the host country may inherit global shocks? Even in the absence of foreign banks, emerging markets are certainly not isolated from global financial shocks, as shown very clearly by the Asian crises. Yet some argue that the presence of foreign banks exacerbates the host country's exposure to global shocks. For some global banks, idiosyncratic shocks in the country of origin—Spain, for instance—may affect the lending behavior of their subsidiaries abroad. In addition, Kyle and Xiong (2001) have shown that "contagion" may be the rational outcome of international financial integration via a wealth effect. While international banks are not the focus of Kyle and Xiong's study, the logic of their argument may apply to international banks as well. In summary, a country that opens its banking system to foreign banks may become less sensitive to its own shocks but at the same time increase its exposure with respect to shocks generated elsewhere.

Empirically, there is some evidence that both effects are at work—that foreign banks' entry makes the banking system (1) less sensitive to domestic shocks and (2) more sensitive to external ones. On the first point, the evidence suggests that lending by global banks is stronger and more stable than lending by domestic financial institutions even in the face of crises in the host country. Dages, Goldberg, and Kinney (2000) show that during the Tequila Crisis foreign banks in both Mexico and Argentina did not "cut and run." The authors find that foreign banks had both the highest loan growth and the lowest volatility in lending growth before, during, and after the crisis for both Argentina and Mexico. Dages, Goldberg, and Kinney also find that lending by foreign banks is less sensitive to changes in domestic real GDP growth than is lending by domestic banks although their research cannot statistically reject the hypothesis that private domestic and foreign banks have the same proportionate response to cyclical forces.[14] Goldberg (2001) also shows that U.S. banks' claims on emerging markets are not highly sensitive to fluctuations in local-country GDP. A study by Demirgüc-Kunt, Levine, and Min (1999), based on the work of Demirgüc-Kunt and Detragiache (1997), finds that the presence of foreign banks reduced the likelihood of a banking crisis in the host country.[15]

A related issue, investigated by Crystal, Dages, and Goldberg (2001), is whether foreign-owned banks are any sounder in terms of lending practices than domestically owned ones. Crystal, Dages, and Goldberg find that in the seven largest Latin American economies, foreign-owned banks fare marginally better than local ones in terms of financial strength ratings (Moody's Bank Financial

Strength Ratings) although there are no significant differences between foreign and private domestic banks. For Argentina, Chile, and Colombia, the authors examine banks' balance sheet data and find that foreign banks tend to have more aggressive loan provisioning and higher loan recovery rates than domestically owned banks do. In summary, the findings of Crystal, Dages, and Goldberg suggest that foreign banks' entry may lead to a sounder banking system in the host country.

The fact that international banks are perceived to be sounder than local banks in times of crises has led some to argue that foreign banks' presence opens the possibility of a "capital flight at home." Before the appearance of foreign banks, investing abroad was the only safe haven for domestic depositors, given the lack of credible deposit insurance. Now, under the assumption that foreign banks are strong enough to withstand a crisis, all depositors need to do is transfer their savings from local to foreign financial institutions. There is indeed some evidence of such a "flight to quality" during the Asian crisis and during the Tequila Crisis in Argentina (IMF 2000; also, see Kane 2000 for a discussion of the policy implications of the "flight to quality").[16]

There is also evidence that the presence of foreign banks may increase the host country's exposure to home country shocks. Specifically, evidence shows that lending by international banks responds to economic fluctuations in the country of origin. Peek and Rosengren (2000a) have widely documented that the lending behavior of Japanese banks in the United States was heavily conditioned by events at home and that these changes in the lending pattern had real effects in the host country. Goldberg (2001) studies the determinants of U.S. banks' claims to emerging markets. She finds that the relationship between claims to Latin America and movements in U.S. real GDP growth is significantly procyclical even after controlling for fluctuations in local GDP and local and U.S. interest rates.

In summary, foreign banks' entry can in principle have two contrasting effects on the domestic financial system—diminished sensitivity to domestic shocks and higher exposure to shocks in the international banks' country of origin. In addition, both effects are empirically relevant, raising the question of which of the two is the most important quantitatively. Although no study to our knowledge directly addresses this question (except perhaps Demirgüc-Kunt, Levine, and Min 1999), the first effect is likely to be more important than the second for Latin American countries. Latin American economies have historically been very volatile, and these fluctuations have had a disrupting impact on the local banking system. Therefore, it is likely that the gains from a diminished sensitivity of lending to local shocks outweigh the costs of higher sensitivity to shocks originated elsewhere. The results from the existing literature suggest that foreign banks' entry is likely to make the banking system more stable. To what extent do the recent events in Argentina lead us to reassess this conclusion, if at all? This question is addressed later in the article, but the next section takes a brief detour into some relevant legal issues.

11. Goldberg (2001) shows that 60 percent of the exposure of large U.S. banks engaged in international lending is in industrialized countries.
12. The next two sections of the article argue, however, that the limited-liability feature of international banks undermines some of the benefits from international portfolio diversification.
13. This point is forcefully made in Stockman (2001). Stockman discusses a related issue, namely the idea of an "optimum central bank area," in opposition to the standard "optimum currency area." The "optimum currency area" literature emphasizes the supposed disadvantages of having asymmetric (that is, uncorrelated) shocks. The idea of an optimum central bank area emphasizes the advantages of uncorrelated shocks from the perspective of a central bank.
14. For Mexico, the above statements hold true for banks with similar impaired loan ratios. For developed countries some of the evidence suggests otherwise. Tallman and Bharucha (2000) find that in Australia during the 1986–93 credit crunch foreign banks cut lending more than domestic ones did.
15. Interestingly, these authors find that the significant variable in reducing the likelihood of a crisis is not so much the share of foreign banks but rather the number of foreign banks.
16. Some authors further argue that "in countries that allow foreign currency deposits, depositors may be more comfortable placing such deposits in foreign banks that have ready access to foreign currency during a banking crisis, with the lender of last resort for the bank being the central bank in the banks' home country rather than that of the host country" (Peek and Rosengren 2000b, 49). In essence, these authors argue that in the absence of limited liability the parent company may have to shore up local branches or subsidiaries. To the extent that this operation affects the solvency of the parent company at home, the home regulator may end up implicitly bailing out the host country banking system. However, because of the limited-liability feature of international banks, it is unlikely that the home country central bank would end up acting as a lender of last resort, particularly if the banking crisis is accompanied by interventions on the part of the foreign government, as was the case in Argentina. The next section directly addresses this issue.

Legal Niceties

What is the relationship between the foreign subsidiary of an international bank and the parent company? If the foreign subsidiary or branch is insolvent, to what extent can depositors or other creditors successfully seek payment from the parent company? If a U.S. bank decides to close down a branch in, say, Connecticut, depositors can withdraw their money at any other branch in the country. Does the same apply to depositors of a U.S. bank's branch in a Latin American country, say, Argentina? If not, why not? We are not experts in international law and hence do not pretend to give a definite answer to these questions. Rather, the goal of this section is to raise these questions—arguing that they are relevant for the issues discussed here—and provide some guidelines for addressing them.

"A member bank shall not be required to repay any deposit made at a foreign branch . . . if the branch cannot repay . . . due to . . . an action by a foreign government. . . ."

Section 326, Riegle-Neal Act

The questions posed above have a clear practical relevance for Argentine depositors. They are also relevant for the larger issues discussed in this article, namely, To what extent do depositors reap the benefits of the fact that global banks have an internationally diversified portfolio? To the extent that a global bank can walk away from a country in crisis without being held accountable for the subsidiary's or the branch's liabilities, an incentive arises to pull out if these liabilities exceed the expected profit from remaining in the country. Hence, at least under some circumstances, the presence of international banks may be no safety net for local depositors during a crisis. These questions are also relevant for home and host country regulators.[17] To the extent that foreign banks have a limited liability, the home country regulator may not be as concerned about the repercussions of foreign banking crises on the financial health of the parent company as it would be otherwise.

This discussion has argued that the above questions are relevant. To address them, let us first consider the case in which the parent company's subsidiary, or the branch, operates in the United States. In the case of the subsidiary the key notion is the one of "corporate veil" (see Cox, Hazen, and O'Neal 1997 and Hamilton 1991). A subsidiary's creditors cannot go after the parent company's assets in case of default only if the corporate veil is in place. Loosely speaking, the corporate veil is in place when the following two conditions are satisfied. First, the subsidiary must present itself to creditors as a clearly separate entity from the parent company. Second, it must act as such—that is, the subsidiary must be independently managed, and the parent company must have no more clout than the majority shareholder in any other corporation. If the subsidiary is a bank, a regulator in the United States is particularly keen on enforcing the corporate veil.[18] To prevent claims on deposit insurance, the regulator wants to avoid a situation in which the subsidiary endangers its financial health by making transfers (sweetheart loans, etc.) to the parent company. Just like any other shareholder, the parent company can profit from the subsidiary only via the dividends it receives. In the case of a domestic branch there is of course no corporate veil. Hence, a bank is fully liable for all of its branches, at least those within the United States.

When the subsidiary operates abroad, the corporate veil argument suggests that the parent company is in general not liable for obligations undertaken by its subsidiaries. In order to obtain payment from the head office, creditors would have to show that the corporate veil has been pierced. In recent court cases—such as the one filed in Spain against BBVA (Reuters Business Briefing, June 18, 2002)—Argentine depositors are arguing that the corporate veil between local subsidiaries and the parent company was thin. As discussed above, in the United States the corporate veil is in place to the extent that the subsidiary presents itself to creditors as a clearly separate entity from the parent company. Some of the success of global banks in attracting deposits, Argentine depositors argue, derived precisely from the fact that they marketed themselves as being "safer" than local banks because they have the backing of the parent company. In times of crises this backing is the main motivation behind the flight to quality. Bank advertising tended to stress the reliability of the corporate name, which further reassures depositors that their money is secure.[19]

In the case of foreign branches the distinction between a branch and a subsidiary is often more blurred than in the United States. In several countries, such as Argentina, branches of international banks are essentially treated as separate entities from the head office by the domestic regulator. For instance, foreign branches have to meet capital

requirements as a separate entity, that is, without relying on the parent company's capital.

Most importantly for branches of U.S. banks, section 25C of the Federal Reserve Act (section 326 of the Riegle-Neal Interstate Banking and Branching Efficiency Act, codified at 12 U.S. Code section 633) establishes that foreign branches have limited liability under some circumstances:

> A member bank shall not be required to repay any deposit made at a foreign branch of the bank if the branch cannot repay the deposit due to (1) an act of war, insurrection, or civil strife; or (2) an action by a foreign government or instrumentality (whether de jure or de facto) in the country in which the branch is located; unless the member bank has expressly agreed in writing to repay the deposit under those circumstances.

This law was added in 1994 after Citibank was sued by depositors at foreign branches in Vietnam and the Philippines and lost the cases. The Philippine case is particularly instructive. In 1983 the Philippine government had confiscated all foreign exchange, making it impossible for the Manila branch of Citibank to repay Wells Fargo's local subsidiary, Wells Fargo Asia Limited, out of local branch assets. The court ruled that "Citibank's worldwide assets were available for satisfaction of Wells Fargo Asia Limited's claims" in spite of the fact that the original contract did not explicitly state so (see *Wells Fargo* 1991). After this and a similar ruling in the Vietnamese case, U.S. lawmakers sought to protect U.S. banks with foreign branches from actions by host-country governments. The 1994 law makes it clear that worldwide assets of a global bank are not in peril if the foreign branch's failure to honor its obligations is the result of a foreign government's intervention. Most analysts regard the Argentine case as falling into this category: The asymmetric conversion of dollar-denominated banks' assets and liabilities (see the next section) and the restrictions on foreign exchange appear to be clear examples of government interventions.

Hence, the chances of Argentine depositors of U.S. banks recovering their funds in the United States are dim. Also, since government intervention of this sort is not at all rare in the event of a banking crisis, the "news" from Argentina may well be relevant for other emerging markets as well.[20]

What would happen in the absence of a foreign government's intervention—that is, if section 326 is not applicable? Consider the following hypothetical scenario: The Argentine government defaults on its debt but refrains from the actions discussed above.[21] Under this scenario, for some Argentine branches or subsidiaries of international banks, locally held assets would still not suffice to cover their deposits. If the parent company refuses to shore up the local branch, can local creditors successfully seek payment from the head office? While this scenario is only hypothetical, one can argue that the question is still relevant to the case of future crises in emerging markets. At least for branches of U.S. banks, deposit contracts generally state that depositors can collect their funds only locally.[22] The contracts also state that the bank-depositor relationship is governed by the local jurisdiction; hence, a U.S. court may refuse to even consider the case (although such a refusal did not

17. This article does not delve into the issue of cross-border supervision. IMF (2000) summarizes the principles and practices of cross-border supervision, with particular reference to the Basel Concordat.
18. According to U.S. law, if a bank holding company owns more than one bank subsidiary, each subsidiary is responsible for losses of other bank subsidiaries owned by the same holding company regardless of whether the corporate veil is in place or not.
19. In the opinion of some analysts, in Argentina "the foreign owners created the illusion that Argentines were depositing their money into a global financial network. Argentines were told that their money was just as safe as if it was deposited in New York, Madrid, or Hong Kong" (Molano 2002).
20. Many previous banking crises in Latin America—for instance, the 1989–90 crisis in Argentina—were also characterized by similar government interventions. One does not need to look far to find evidence of government interventions following large shocks to the economy. Roosevelt's actions in the aftermath of the Great Depression—the abandoning of the gold standard, the Bank Holidays, and the repudiation of the gold clauses—have close parallels with the Argentine government's actions during the current crisis (although the Argentine government imposed a different conversion rate for banks' assets and liabilities). Kroszner (1999) argues that the repudiation of the gold clauses—which is the equivalent of the Argentine's government conversions of all dollar loans into pesos—was actually perceived as a beneficial action by financial markets. Needless to say, the Argentine government was not as successful.
21. The government debt's default could also be considered a form of government intervention. Whether this is the case from a legal perspective, from an economic point of view it is a very different action from, say, a forced conversion of assets: debt holders are fully aware of the possibility that the debt issuer might default and ask for a risk premium as a compensation for the possibility.
22. Of course, this stipulation applies to the extent that the local branch has enough funds to meet its liabilities. To our knowledge, the contracts do not explicitly state what would happen in case of liquidation of the branch.

occur in the court cases mentioned above).[23] A local court may well demand that the parent company honor its obligations, but the court may have little power of enforcement. In conclusion, it is not clear that creditors of branches or subsidiaries can successfully attach the parent company's assets even in the absence of outright government intervention.

Bad News from Argentina

Before the current crisis, the Argentine banking system was hailed as a success story for Latin America (see Kiguel 2002): A 1998 World Bank study rated Argentina's regulatory regime among the top three in emerging markets (see Calomiris and Powell 2000). Because Argentina was under a currency board (so-called convertibility) regime, the central bank was, by law, severely restricted in its role as a lender of last resort.[24] Hence, the regulator had to make sure that the banking system could stand on its own. To achieve this goal, policymakers pursued a two-tier strategy. The first tier consisted of strengthening prudential regulation (see Calomiris and Powell 2000 for an insightful description of Argentine regulatory approach). Capital requirements were stricter than those imposed by the Basel Committee: The capital asset ratio was set at 11.5 percent as opposed to the 8 percent level recommended by the Basel Committee (Kiguel 2002). Furthermore, capital requirements were adjusted depending on the CAMEL rating of the bank.[25]

Before the current crisis, the Argentine banking system was hailed as a success story for Latin America.

To better assess the riskiness of financial institutions, the regulator also required banks to issue subordinated debt for an amount equivalent to 2 percent of deposits (although foreign banks with good credit ratings did not have to comply) and to be monitored by international credit rating agencies. Banks were also subject to liability requirements—that is, reserve requirements for all liabilities (not only for deposits), depending on their maturity. Liability requirements amounted to about 30 percent of the system deposits (Caprio and Honohan 1999). Indicative of the regulator's faith in foreign financial institutions is the fact that as much as 80 percent of the liquidity requirement could be fulfilled by holding balances at qualifying foreign banks, possibly abroad.

Deposit insurance, which had been abolished in 1992, was reinstated in 1995 during the Tequila Crisis—albeit with a limited scope—with the purpose of strengthening depositors' confidence in the banking system. Deposit insurance was funded via a premium on banks that varied from 0.015 to 0.06 percent of deposits and was implemented via an entity (*Seguro de Depositos Sociedad Anonima*, or SEDESA) that by law could not rely on resources from either the central bank or the Treasury. The scheme covered only deposits up to $30,000 and in principle should have been endowed with enough resources to cover 5 percent of deposits. By the end of 2001, however, the fund had only $270 million, which covered about 0.4 percent of all deposits. A key feature of the scheme, particularly in light of what was to follow, was that it could invest up to 50 percent of its assets in government bonds (*Sistema de Seguro* 2002).

The second tier of the strategy consisted in welcoming foreign banks' entry, especially in the aftermath of the Tequila Crisis. Argentina quickly became one of the first countries in Latin America with substantial foreign bank presence. Finally, the central bank set up a contingent credit line with international banks—a partial substitute for the lack of a lender of last resort. The Argentine financial system's ability to withstand the Tequila Crisis without major losses, in spite of large shocks to deposits (Kiguel 2002), and to weather successfully the East Asian, Russian, and Brazilian crises seemed to suggest that Argentina had found the avenue to banking system stability.[26]

Of course, the current crisis changes the picture considerably. The Argentine economy unraveled in 2001, culminating with the collapse of the convertibility plan that had linked the peso to the dollar at parity (see Box 2 for a brief chronology of the Argentine crisis). The default on government debt in December 2001 had devastating consequences for the banking system as a sizable portion of bank assets (about 21 percent in October 2001) was in government liabilities.[27] In November 2001 the government induced the banks to "voluntarily" swap government bonds for illiquid government liabilities, prompting large deposit withdrawals: Deposits fell 24 percent by the end of the year. In the final days of the De la Rua government only a freeze on deposits could prevent a widespread bank run.[28] In January 2002 convertibility ended and the peso underwent a large devaluation. By government

decree, in February 2002 all dollar-denominated loans were converted to pesos at one to one while dollar-denominated deposits were converted at 1.4 pesos per dollar. According to Moody's, the banking system's losses as a result of the crisis could reach $54 billion. Deposit insurance quickly ran out of funds (Para Scotia 2002): In February 2002 a presidential decree revised the deposit guarantee law to allow for compensation of depositors via nontradable government securities.[29] Given that a sizable fraction of deposits (72 percent by December 2001) was dollar-denominated, the central bank could hardly intervene as a lender of last resort. By early 2002 international banks were ready to leave the country or at least threatening to do so (Ryst 2002). Given the Argentine government's heavy-handed intervention in the banking system, the analysis of the previous section suggests that at least for U.S. banks the parent company may not be liable for the local branches.

As the crisis unraveled, some of the supposed benefits of international banks did not quite materialize as expected. As mentioned above, one of the main advantages of international banks is that their portfolios are well-diversified and hence can withstand a localized crisis. This advantage was indeed true for many of the international banks involved in the Argentine crisis. However, banks' local branches and subsidiaries, when considered as stand-alone entities, had portfolios that were by and large just as vulnerable as those of domestic banks to the shocks that hit the economy, like the government's default.[30] To the extent that international banks could walk away from the subsidiaries' liability, from the depositors' perspective the local branches or subsidiaries of international banks were indeed stand-alone entities. Interestingly, the data suggest that this fact seemed to be understood by Argentine depositors—although this specific question certainly deserves a much deeper analysis than the one undertaken here. Chart 4 seems to indicate that little or no flight to quality took place as the crisis developed during 2001 except in the very last months. The observed flight to quality was specifically toward branches of foreign banks perhaps because of their lower exposure to government liabilities.[31]

In summary, the bad news from Argentina is that even a sizable presence of global banks may not be enough to protect depositors from the occurrence of a banking crisis. This article argues that one of the reasons why this is the case is that under some circumstances—and most likely under the circumstances that developed in Argentina following heavy government intervention in the banking system—international banks are shielded from their liabilities. In other words, they may not be legally compelled to recapitalize Argentine branches or subsidiaries. As we write, only a few foreign banks (Credit Agricole, Scotiabank) have explicitly abandoned their Argentine branches or subsidiaries. To the extent that Argentine taxpayers will assume at least part of those liabilities or that depositors will be forced into accepting a subpar compensation for their funds, some foreign banks may decide to stay in the end.[32] Negotiations are under way. In these negotiations, a key factor affecting foreign banks' bargaining power has to do with reputation. On the one hand, a default in Argentina may harm the

23. Interestingly, the court's motivation was as follows: "If the goal is to promote certainty in international financial markets, it makes sense to apply New York law uniformly, rather than conditioning the deposit obligations to the vagaries of local law.…" (*Wells Fargo* 1991).
24. The 1992 central bank charter barred the central bank from offering either implicit or explicit guarantees for bank liabilities to the extent that these guarantees were backed by fiscal funds (see Schumacher 2000). The central bank was, however, able to extend repos and rediscounts to financial intermediaries, albeit under restrictions, and to change the reserve requirements. During the 1995 Tequila Crisis the central bank used both instruments in order to weather the crisis (see Calomiris and Powell 2000).
25. The CAMEL score is a measure of the financial health of a bank.
26. Schumacher (2000) reports that by December 1995 nine banks had failed, and thirty had been acquired or merged, out of a total of 137 private banks.
27. For subsidiaries of foreign banks the exposure to the government was also around 20 percent. For branches of foreign banks, however, the corresponding figure was much lower—around 10 percent.
28. The freeze on deposits is still in place as this article is written.
29. The deposit law guarantee now states that these securities cannot be endorsed; depositors would have to hold them to maturity. See *Sistema de Seguro* (2002).
30. However, as discussed above, Crystal, Dages, and Goldberg (2001) find that foreign banks' portfolios were in general marginally sounder than those of domestic banks. See also footnote 27.
31. Martinez Peria and Schmukler (2001) study the extent to which depositors discipline banks in Latin American countries.
32. In the 1989 crisis bank deposits were replaced with bonds that traded at a large discount; the swap was known as the Bonex plan. A similar plan, known as Bonex II, is currently been considered by the authorities.

BOX 2

Chronicle of the Argentine Crisis

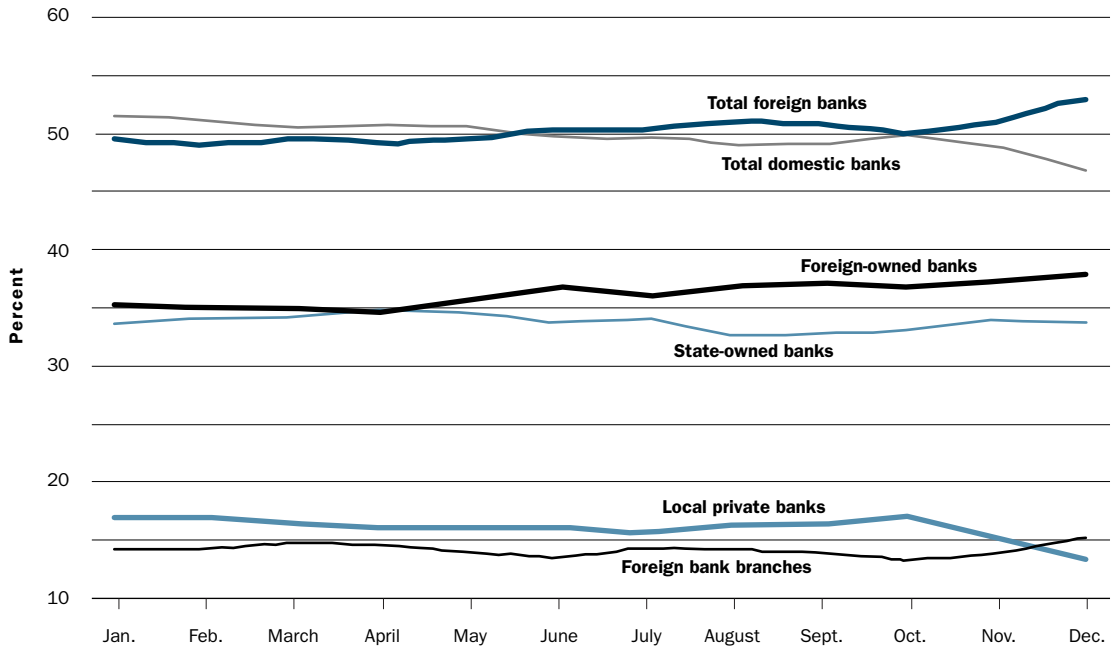
	Events	EMBI+ bond spread over U.S. Treasuries (at end of period)[1]
October 2000	Confidence erodes after Vice President Carlos Alvarez resigns.	815
December 2000	The IMF leads a $39.7 billion three-year rescue package.	773
January 2001	Capital returns to the country, central bank reserves increase $1.3 billion, and deposits increase $1.2 billion.	663
February 2001	Allegations of malfeasance are made against central bank President Pedro Pou. The Turkish crisis begins.	803
March–April 2001	Economy Minister Jose Luis Machinea resigns. His replacement, Ricardo López-Murphy, holds office less than two weeks. Domingo Cavallo takes over. Devaluation fears grow after the Convertibility Law is altered to eventually link the peso with the dollar and the euro.	1,042
June 2001	Argentina completes a $29.5 billion debt swap.	1,025
July 2001	Sharp falls in deposits occur, and bond spreads widen. Congress approves a zero deficit law calling for the immediate cut of the fiscal deficit through budget cuts and tax hikes. Salaries and pensions over $500 are cut by 13 percent.	1,599
August–September 2001	New fiscal austerity measures are enacted. The announcement of an IMF assistance package calms default fears. Unemployment is at 17.2 percent. The IMF announces up to $8 billion of additional loans ($5 billion available immediately and $3 billion available later depending on future reforms).	1,595
October 2001	Opposition Peronists win in legislative elections.	2,136
November 2001	The government announces a new, ostensibly voluntary, debt swap of as much as $16 billion in high-yield government bonds held by local banks and pension funds for securities that pay lower interest but are guaranteed by tax revenue. The IMF endorses the swap. Sovereign bond spreads widen. A sharp decline occurs in deposits. Tax revenue drops, and the zero fiscal deficit plan becomes clearly unsustainable.	3,340

	Events	EMBI+ bond spread over U.S. Treasuries (at end of period)[1]
December 2001	2001 deposits fall from $85 billion to $64.6 billion. 2001 GDP falls 3.9 percent. Restrictions on deposits are imposed in the wake of the run on deposits. Withdrawals are limited to 250 pesos per week (later raised to 1,200 pesos per month). Violent protests occur. Domingo Cavallo and Fernando De la Rua resign. Interim President Rodriguez Saá announces a moratorium on foreign debt.	4,404
January–February 2002	President Eduardo Duhalde is sworn in, and the convertibility law ends. A dual exchange rate is announced in January, and a floating exchange rate is introduced in February. Bank assets are converted to pesos at 1 to 1; liabilities are converted at 1.4 to 1. The banking system is in crisis because of a currency mismatch, a decline in value of asset portfolios, and losses from holdings of $30 billion in government debt. Converting dollar loans at parity could generate losses up to $18 billion for the banking sector. The government announces that bank losses will be partially compensated by issuing bonds and indexing loans to inflation.	4,098
March–April 2002	The largest private bank, Banco Galicia, receives an $800 million bailout from the central bank and fifteen local banks. Foreign banks postpone decisions on recapitalization. The central bank intervenes in a Scotiabank subsidiary. The government continues to negotiate with the IMF. Economy Minister Remes Lenicov resigns after mandatory bonds-for-deposit swaps are rejected. He is replaced by Roberto Lavagna.	4,831
May 2002	Scotiabank (Canada) and Credit Agricole (France) plan to sell or close their Argentine units. Societe Generale (France) agrees to recapitalize its Argentine unit.	6,123
June 2002	Voluntary deposit-for-bond swaps are announced. $9.5 billion in ten-year dollar bonds is to be provided to banks to compensate for losses associated with the devaluation and currency mismatch. Negotiations with the IMF are set to resume.	6,791

1. Bond spreads are from JP Morgan's Emerging Market Bond Index (EMBI+) for Argentina.

CHART 4

Deposit Evolution of Foreign and Domestic Banks in 2001



Source: Banco Central de la República Argentina

position of these international banks in other emerging markets. On the other hand, an unconditional recapitalization of local branches could induce other emerging-market governments to believe that foreign banks may always pick up the bill for their lack of fiscal discipline.

Conclusions

There are interesting similarities between the policy debate that took place in the United States in the 1980s and early 1990s with regard to interstate branching and the current debate in emerging markets on international banks (see IMF 2000). Proponents of interstate branching in the United States saw the gains in efficiency from increased competition and the increased stability due to wider portfolio diversification as the two main benefits from lifting restrictions. Opponents claimed that out-of-state branches would draw funds away from local markets and neglect local small businesses.[33] Likewise, opponents of foreign banks' entry into developing markets claim that these banks neglect lending to small enterprises and may amplify credit rationing in times of crisis. In contrast, proponents of foreign banks emphasize the benefits to be gained from efficiency and portfolio diversification. This article documents that the empirical literature by and large sides with the proponents of global banks' entry. Many of the arguments against international banks do not seem to find empirical support.

This article focuses mainly on the issue of banking systems' stability during a crisis, specifically on the following claim, as summarized in an IMF report: "It has been suggested that foreign banks can provide a more stable source of credit and can make the banking system more robust to shocks. The greater stability is said to reflect the fact that the branches and subsidiaries of large international banks can draw on their parent for additional funding and capital when needed. In turn, the parent may be able to provide such funding because it will typically hold a more internationally diversified portfolio than domestic banks, which means that its income stream will be less correlated with purely domestic shocks" (IMF 2000, 163).[34]

The discussion points out that, at least under some circumstances, international banks may not be fully liable for the obligations of their foreign branches or subsidiaries. Because of this limited-liability feature, local depositors may not reap the full benefits from portfolio diversification offered by the presence of foreign banks. During crises, and especially in cases of crises-cum-government-intervention, the branch or subsidiary may default and depositors may not be able to make claims against the parent company's

assets. Hence, under such circumstances, the greater portfolio diversification of international banks is of no avail to local depositors.

These arguments, especially in light of recent events in Argentina, suggest that international banks' presence is not a panacea against banking crises. But it is important to note that this argument should not be taken as an argument against foreign banks' entry. First, it is not clear that a financial system closed to foreign banks would be any better. Past crises in Latin America strongly suggest that it would not. Second, the literature has pointed out a number of other important benefits from foreign banks' entry. Third, it is not clear that a priori the limited-liability feature of foreign banks reduces welfare. One may argue that the limited-liability feature of foreign banks increases the cost of financial crises for governments and thus may induce governments to pursue policies that avoid crises. Finally, in the absence of this feature, the expansion of international banks might not have occurred in the first place. At the same time, however, it is not clear that all the incentives generated by the limited liability feature are in the right direction. To the extent that local depositors are unaware of international banks' limited liability, these banks have an incentive to borrow locally and invest in high-yield government securities: The limited-liability feature, if it applies, covers international banks from the risk of government default. More work at both the theoretical and empirical level is needed to investigate these issues.

33. See Jackson and Eisenbeis (1997) for an empirical refutation of the first point.
34. Note that the IMF report does not necessarily endorse these views.

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