

THE BANKING SYSTEM AND CREDIT IN ARGENTINA, BRAZIL, CHILE, AND MEXICO: THE CHALLENGES OF STABILITY AND GROWTH

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The banking sector in Latin America has undergone major changes in the recent past. Moving from highly controlled systems in which governments set interest rates, directed credit, and held a large share of bank deposits as required reserves, countries freed commercial banks to make their own decisions about borrowers, loan volume, and prices. At approximately the same time, capital account liberalization enabled local banks to engage in transactions in foreign currencies and allowed foreign institutions to enter local markets. Frequently such changes were made without having in place an adequate regulatory and supervisory system, which compounded problems for bankers without sufficient experience in credit analysis of local borrowers, much less the complexities of international financial markets. In addition, in some cases the abrupt integration of financial systems of widely different structure, size, and depth was in itself a source of instability.²

The typical results of such multifaceted processes were credit booms, often rapidly expanding mismatches between maturities and currencies, followed by banking crises. Government rescues tended to follow, in a standard package: in the first instance, they involved takeover of nonperforming loans, recapitalization of banks, and liquidations and mergers, usually involving foreign institutions.

Later, in an attempt to prevent future crises, regulation and supervision were stepped up, greater information and transparency were required, and deposit insurance was sometimes put in place. In the process, the banking sector has become more open and more integrated with the international financial markets, and, following the international trends in the banking business, the characteristics of the sector in Latin America are changing in at least four fronts: the establishment of universal banking, entry and/or expansion of foreign institutions, slight increase in the concentration of ownership in the sector (as a result of the processes of mergers and

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acquisition, including privatization), and increasing diversification with respect to the development of capital markets.

The Tequila Crisis represented a turning point for the system in the 1990s—particularly in the cases of Argentina, Brazil, and Mexico. I claim in this paper first that the Tequila Crisis, rather than being the cause of the banking crises in the three countries, merely unveiled vulnerabilities of the sector. Second, the speed and the depth of the changes in regulation and supervision in the four countries were directly related to how profoundly their banking sectors were affected by the impact of the Tequila Crisis and how rapidly domestic authorities managed to reestablish “normal functioning” of the existing institutions and markets. Finally, I make the case that even though there were some fundamental improvements in the regulation and supervision, structure and functioning of the banking sector after 1994–95, it continues to be highly vulnerable to the increasingly volatile macroeconomic environment that has affected particularly Argentina, Brazil, and Mexico.

To address these issues, and because of the limits on the length of the paper, its analysis focuses on four cases already mentioned above: Argentina, Brazil, Chile, and Mexico. The choice of these four cases was not random: not only are they large economies in the region, but they also represent quite different and illuminating experiences concerning stability, changes in regulation and supervision, and performance of the banking sector in the recent past.

This paper first briefly reviews the processes of financial liberalization and the crisis in the banking sector in Chile, Argentina, Brazil, and Mexico in the recent past.³ The paper then analyzes changes in regulation and supervision and structure of the banking system in the 1990s—in particular after the Tequila Crisis—and assesses how such changes are affecting the potential stability and provision of credit to the domestic private sectors. The final section summarizes the findings and presents my conclusions.

Financial Liberalization and Opening and Crises: The Background for the Changes in the Banking Sector in the 1990s

Departing from highly repressed financial systems, since the 1970s all four economies at some point experimented with financial liberalization and opening and crisis. The crisis in turn led to significant changes in regulation and supervision, and often to the restructuring of the *modus operandus* of the system, including the entry of new actors (such as foreign banks in the 1990s).

Chile was the first of these four economies to engage in such a process in 1974.⁴ After a few years of rapid expansion of bank deposits and loans, a banking crisis in 1981 forced the authorities to partially nationalize and recapitalize the banking sector.⁵

² For an analysis of the destabilizing effects of such integration, see Studart (2001).

³ The ordering of the presentation of the cases has to do with the timing of the processes of financial liberalization. Thus Chile, being the first country to liberalize its financial systems before the Tequila Crisis, is the first in line.

⁴ See Held and Jiménez (1999) and Gallego and Loayza (2001) for reviews of the recent history of development of the Chilean financial sector.

This restructuring was followed by a thorough revision of the regulation and supervision of the banking sector, which established a modern prudential regulation and enforced supervisory capacity by the state. A new banking law was drafted, encompassing higher capital and reserve requirements related to banks' leverage position, mandatory information disclosure to the public, a partial public guarantee on deposits, and severe separation between the core business of banks and their subsidiaries.

The Chilean banking system was once again privatized in the 1990s. In a context of rapid growth, solid macroeconomic fundamentals, and gradual external financial liberalization,⁶ it expanded rapidly and with no significant crisis.⁷

The Chilean banking system was thus little affected by the Tequila Crisis for at least two reasons: first, its macroeconomy was not affected as much as the other economies, due to its lower levels of external debt, strong trade balance performance, and sound domestic foundation (for instance, high growth and fiscal balance); second, the Chilean banking system had long been going through major changes in supervision, regulation and structure. As a matter of fact, from 1991 onward, bank activity started expanding at a rate that was slightly higher than that of gross domestic product (GDP), such that the relation between loans and GDP expanded uninterruptedly until 1999. Other indicators also point to an improvement in the efficiency and further consolidation of the banking sector (Ahumada and Marshall 2001, 46–47). In addition, lending rates and spreads decreased substantially, an indication that the perceived default risk declined with the process of expansion of lending.

Argentina was also an early reformer: in 1977, a liberalizing financial reform was carried out, but (like in Chile) it had to be reversed due to a banking crisis.⁸ But in contrast to Chile, only in 1989, in the context of the new stabilization program (the Convertibility Plan), did Argentina undergo a deep, and rather abrupt, process of financial liberalization and opening. The process included the elimination of most of the controls on domestic and foreign operations of the domestic financial system, which had been imposed during the period of high inflation and external constraints; privatization of government banks; and the elimination of barriers to foreign banks.⁹

Another important difference in the Argentine case, in relation to Chile, was the external and domestic macroeconomic environments in which such reforms took place. Two important factors should be stressed. First, the international scenario of the early 1990s, marked by rising liquidity, declining international interest rates, and the exceptional performance of the

⁵ This restructuring was initiated by the intervention of twenty-one financial institutions, including the two largest banks in the country (Banco de Santiago and Banco de Chile). Later, fourteen of these institutions were liquidated while the rest were rehabilitated and privatized.

⁶ Firms were initially allowed to issue bonds and shares in external markets; later, institutional investors (banks, pension fund managers, and insurance companies) were allowed to hold external assets, and capital controls were gradually eased; in September 1998 remaining controls were eliminated. Finally, international trade payments transactions were liberalized.

⁷ More on this is discussed below.

⁸ This crisis led to the nationalization of a significant part of the banking sector. For an analysis of this earlier attempt, see Studart and Hermann (2001, 34–38).

⁹ See Studart and Hermann (2001, 38–39) for a list of the main regulatory changes in 1989.

U.S. economy, led to a surge of optimism in the Argentine financial markets and the country's integration with the international financial markets. In this context, and given the significant reduction of exchange risk, the freedom of capital movements, and the radical process of privatization that took place in the early 1990s, Argentina received in a very short period of time large volumes of foreign capital, a significant part of which through the intermediation of domestic banks. Second, price stability and a fixed exchange rate regime abruptly reduced both inflation and exchange rate risks—or at least the perceived potential risks. These domestic and external factors created a fertile environment for the rapid growth of financial activity, but also for rapidly increasing maturity and exchange rate mismatches.

From 1989 to 1994, the Argentine financial sector had an impressive recovery: The levels of deposits and loans more than doubled, while peso and dollar lending rates fell significantly (Stuart and Hermann 2001, 116, Table a.3). This performance resulted from several important features, some of which have already been mentioned: (1) a process of monetization—which normally follows price stability—led to a rapid growth of deposits in the banking sector; (2) an increase of foreign capital inflows raised the confidence in the Convertibility Plan and increased banks' propensity to make dollar-denominated loans and borrowers' willingness to borrow in dollars (and produced a slightly lower interest rate in dollars), thus leading to a rapid process of dollarization of both liabilities and assets of the banking sector;¹⁰ (3) the increase of competition among banks and the improvement of overall confidence reduced banks' liquidity preference, resulting in a rapid expansion of credit despite the initial poor macroeconomic performance. In the case of domestic banks, this increased liquidity pushed them into being less careful in their lending strategies and thus deteriorated portfolio quality.

Given the timing of the financial liberalization process and the characteristics of the growth of the banking system in the first half of the 1990s, the Argentine banking system was particularly vulnerable to the Tequila Crisis. The currency board system in Argentina meant that domestic monetary authorities had no other instrument to face the potential capital outflows but to allow domestic rates to rise in 1995. This rise in interest rates provoked an increase of arrears and defaults and reduced the confidence of depositors, leading to significant withdrawals of deposits.¹¹ Even though the Convertibility Plan had been successful for almost six years, depositors expressed their fears of devaluation by withdrawing dollar deposits rapidly. Thus, in addition to a severe liquidity problem, many banks had to face an increased exchange rate mismatching.

The combination of deteriorating quality of assets and loss of deposits pointed to the vulnerable side of the seemingly solid Argentine system. To avoid an open banking crisis, the

¹⁰ It may seem paradoxical that one of the byproducts of the success of the stabilization program was an increased demand for assets and liabilities denominated in U.S. dollars. However, due to the increased access of domestic banks to the international money markets, they could offer dollar-denominated loans at lower rates than those in pesos. Because most borrowers had confidence in Convertibility, it was only natural that they should assume that the exchange rate risk was close to zero and thus that dollar-denominated borrowing was preferred.

¹¹ By May 1995, the loss of deposits had reached U.S.\$8.4 billion, around 19 percent of the total deposits of the banking system (Lopetegui 1996, 14).

Argentine Central Bank (BCRA) began injecting liquidity through its discount window, backed by the sale of dollar-denominated bonds—which in turn led to an increasing exchange rate exposure of the government—and by reducing reserve requirements for banks. Despite these steps by BCRA, the accumulated losses corresponded to 12 percent of the banking sector's net worth by the first semester of 1995 (Stuart and Hermann 2001, 43).

As is well documented, the crisis was reversed only by decisive support from the International Monetary Fund (IMF) and World Bank. But the solution to the crisis also involved a significant fiscal adjustment, which led to a GDP contraction of 4.6 percent in 1995.¹² For this paper's purposes, the crisis exposed the fragility of the domestic banking sector, which in turn prompted a set of regulatory and supervisory reforms and an acceleration of the internationalization of the Argentine banking sector from 1995 onward.

Brazil was a later and less ambitious reformer than Chile or Argentina. In 1988, a banking reform was implemented establishing a universal banking system, which led to a sharp reduction in the number of commercial banks, investment banks, and finance companies—most of which became universal banks, institutions that dominate Brazil's financial system today. However, these changes should not overestimate the importance of the reform, whose real significance lies in the fact that it consolidated a trend already in course during the 1980s: the overwhelming dominance of universal banks. That is, Brazil's financial structure is a credit-based market dominated by a small number of financial conglomerates comprising a commercial bank and a few nonmonetary institutions, all of which operate with a very short-term time range.

Unlike in Argentina, the causes of the 1995 banking crisis in Brazil preceded the Tequila Crisis, even though the latter deepened the problems within the banking sector. The fundamental reasons for such a crisis are associated with the abrupt adjustment that the banks had to undertake due to the success of the 1994 stabilization program (*Plano Real*).

During the 1980s, banks earned substantial profits from inflationary gains associated with the peculiar role of double intermediary of the public debt that the Brazilian banks enjoyed during the long period of high inflation and indexation (see Stuart and Hermann 2001). The abrupt decline of these gains, and the high fixed costs in Brazil's banking sector, led private banks to initially expand credit—basically through consumer and commercial loans—which allowed the boom in the demand for consumer goods following the 1994 stabilization program.¹³ The rapid and sometimes careless expansion of credit, the high interest rate policy, and the rising unemployment provoked a rise of nonperforming loans and arrears.

The monetary authorities tried to restrict this expansion by setting very high levels of reserve requirements, which nonetheless failed to constrain the expansion of credit. In addition, interest rates remained very high, which created an increasingly dangerous mix of credit

¹² Unless otherwise stated, all macroeconomic data mentioned in these papers are from the ECLAC database.

¹³ Domestic demand increased rapidly in the aftermath of the monetary reform. The reasons behind the consumption boom were threefold: the slight increase of real income created by the abrupt decline of the inflation tax, the rise of minimum wage during the monetary reform, and the rapid expansion of consumer and commercial credit, mainly coming from private banks.

expansion and high lending rates. The public banks faced additional problems due to their limited capacity to restructure their portfolios (dominated by state government debt) and their high operational costs (in view of the job stability of many of their employees).

The Tequila Crisis was thus “the last straw” in a process of increasing bank problems, as the response of the monetary authorities to the reversal of capital flows was an abrupt further increase of interest rates and monetary tightening. Consequently, the Brazilian banking system went through severe difficulties in the aftermath of the *Real Plan*, which prompted a series of Central Bank interventions meant to avoid systemic risk and to restructure the banking system.

Like Argentina, after a long period recovering from the 1982 banking crisis, in 1988 Mexico embarked on an ambitious new process of financial liberalization—including reprivatization of the previously nationalized banks and liberalization of interest rates. The response of the banking system was almost immediate: there was a rapid growth of deposits and lending (around 30 percent per year in real terms from 1989 to 1994). But, as admitted by most analysts, the first years of privatization were also characterized by “reckless—sometimes fraudulent—lending as a result of poor supervision and underdeveloped regulations. Poor credit-analysis procedures and few internal controls characterized the sector during this time. Banks put themselves in a precarious position as their lending outpaced their deposit, and they funded the shortfall through interbank borrowing - mainly from foreign banks” (EIU 2001, 7).¹⁴ This conjunction of factors led to a rapid rise of past due loans, and the liquidity in the interbank market. In this context, a significant number of banks faced severe difficulties—only to be aggravated by the 1994–95 crisis.

Thus, and not surprisingly, the Mexican banking system was directly hit by the peso crisis. The levels of exchange rate mismatching were not significant, because Mexican regulation limits banks’ foreign exchange exposure. However, leverage and levels of past due loans had grown very rapidly in the period prior to the crisis, leading to a very fragile banking sector.

The devaluation was followed by a plunge in economic activity, and thus a further deterioration of the asset quality of most banks was significant (McQuerry 1999, 16–17). As an immediate response to the crisis, fifteen banks were taken over by the authorities, which also sponsored a long, deep process of restructuring through mergers and acquisitions and reprivatization (Yacamán 2001, 102–5). Despite this long and costly process of restructuring, the banking system has yet to recover from the 1994 crisis: the relation between credit to the private sector as a percentage of GDP declined almost steadily from 1994 onward.

¹⁴ It is interesting to note that the growth of nonperforming loans had little to do with GDP performance. GDP growth did slow considerably (from 5.1 percent in 1990 to 2.0 percent in 1993), but the decline was gradual. Furthermore, in 1994 the economy picked up again to 4.4 percent real GDP growth. Despite this growth performance, nonperforming loans increased from around 2 percent in 1990 to almost 9 percent in 1994—prior to the Mexican peso crisis (McQuerry 1999). The lack of a relation between growth and nonperforming loans seems to indicate that the deterioration of banks’ portfolios was determined by reckless lending.

Changes in Regulation and Supervision and in the Structure of the Banking Sector: Chile, Argentina, Brazil, and Mexico

As mentioned in the introduction, the Tequila Crisis merely unveiled the strengths and vulnerabilities of the banking systems in several Latin American economies. It is fair to say that the speed and the depth of the changes in regulation and supervision (R&S) in the four countries were directly related to how profoundly their banking sectors were affected by the impact of the Tequila Crisis and how rapidly domestic authorities managed to reestablish “normal functioning” of the existing institutions and markets. The changes in R&S—including the new rules concerning lending practices and the entry of foreign players—are in turn slowly changing the structure of the domestic banking sector in Latin America, and this is partly reflected in recent performance.

Regulation and Supervision.¹⁵ Chile stands out as a particularly important case due to two factors: first, already in the 1980s Chile had taken steps in cleaning up the banking sector and establishing a modern regulatory and supervisory system. Second, partly due to its advanced prudential R&S and partly due to the strong macroeconomic fundamentals of its economy in 1994, Chile was less affected by the Tequila Crisis. Having done crucial changes in R&S in the 1980s (as already described above), in the 1990s the main concern of the monetary authorities was to implement the already existing rules, and thus to improve supervision.

Argentina’s banking sector, in contrast, was strongly affected by the Tequila Crisis, given the intrinsic characteristics of its monetary and exchange rate regime and the degree of dollarization of the assets and liabilities of its banks.¹⁶ And after 1995, it became clear that Argentina’s banking sector was highly vulnerable to changes in domestic interest rates, exchange rates, and depositor confidence; that domestic banks were more vulnerable than the foreign-owned ones; and that some additional mechanisms were needed to increase systemic liquidity (especially for dollar deposits), since the capacity of the monetary authorities to intervene in periods of crisis was very limited under the Convertibility Plan.

To overcome the crisis, an initial set of measures was introduced to restructure the sector by injecting capital, promoting mergers and acquisitions, and creating incentives for the expansion of foreign banks. And to prevent the crisis (by mitigating the weaknesses of the systems that were revealed by the crisis), several changes in R&S were made. Among the most important regulatory changes in Argentina after 1995, five should be emphasized.

First, a full restructuring program, supported by funds of the BCRA (Fondo Fiduciario de Capitalización Bancaria [FFCB]), created in March 1995), was implemented and aimed at capitalizing and strengthening the banking sector through incentives for the acquisition of banks in trouble by those with a more solid market position.

¹⁵ This section is strongly based on Stallings and Studart (2001).

¹⁶ That is, external shocks leading to real exchange rate misalignment (such as the 1999 devaluation of the Brazilian *real*) and/or capital outflows could be faced only with abrupt rises of interest rates and/or output contraction.

Second, a deposit insurance scheme (Fondo de Garantía de Depósitos [FGD]), supported by private funds, was introduced in May 1995. It was a measure to increase depositor confidence (aimed at avoiding “bank runs”) and the safety nets of the banking sector.

Third, a new system of reserve requirements was introduced to reduce leverage and improve safety. This new system widened the scope of the previously existing policy to encompass all bank liabilities, rather than just sight and saving deposits, as was the case earlier.¹⁷

Fourth, an innovative mechanism to increase the systemic liquidity of the banking sector was introduced (Programa Contingente de Pases [PCP], created in December 1996). It established contracts between the BCRA and international banks in which the BCRA acquired the right to sell, in dollars, to the latter dollar-denominated government bonds and mortgage-based securities. This means that the participating banks (nineteen in 1999) provide a short-term overdraft line that, in effect, gives the BCRA a lender-of-last-resort facility in times of crisis.

Fifth, measures were introduced to stimulate the continued process of mergers and acquisitions and to expand the share of foreign banks in the domestic market.

The results of these policies were quite positive in many respects. In the second half of the 1990s, private bank provisions in relation to total credit increased substantially, liquidity within the banking sector rose, and the capital adequacy ratio was maintained at levels far beyond those established by the Basle I guidelines. In addition, foreign banks more than doubled their share of the market between 1994 and 1999.

In sum, the regulatory framework of the Argentine banking sector became more solid, which partly explains Argentina’s ability to deal with the emerging market crises that characterized the late 1990s—the Asian crisis (October 1997), the Russian crisis (August 1998), and the Brazilian crisis (January 1999)—reactions far superior to what was observed after the Mexican crisis.¹⁸

Brazil also took important steps concerning changing the regulation and supervision of its banking system, but, as mentioned above, these were not prompted by the Tequila Crisis itself. During the first three years of the successful stabilization program, 40 banks (of the 271 that existed in July 1994) were intervened by the Central Bank: 29 were liquidated, 4 failed, 6 were placed under temporary administration, and 1 continued to operate. A further 32 banks went through restructuring that resulted in mergers and acquisitions, some of them with government support through the bank restructuring program (PROER), which included fiscal incentives for banks to acquire other financial institutions, and promotion of mergers (among domestic banks) and acquisitions (by foreign banks).

¹⁷ This led to a substantial increase of required reserves, from 10.8 percent of total deposit in 1994 to 15.8 percent in 1995.

¹⁸ The fact that Argentina’s banking sector is now more solid does not mean that it has become invulnerable. The main vulnerability of the system continues to relate to the potential liquidity and exchange risks associated with the fragile exchange rate regime adopted. That is, due to the widespread dollarization of the system, a loss of confidence in convertibility could at any moment generate deposit withdrawals associated with outflows of capital. An eventual exchange rate crisis, such as the one faced by the Argentine economy in 2001, put the system under insurmountable stress. More on this is discussed below.

Another program (PROES), introduced in 1997, was directed at the restructuring of the public financial institutions.¹⁹ This facility was created by the Central Bank to provide bridge loans to federal and state banks to speed up their restructuring and in some cases their privatization or liquidation. In the process of restructuring, foreign banks were allowed to enter the economy. The number and participation of foreign banks increased significantly after 1995, representing a competitive challenge to Brazilian banks. Nevertheless their entry has not fundamentally changed the way the domestic banking sector acts: credit rationing is still a reality, spreads are significantly higher than those found in developed and even in most developing economies, and foreign players tend to concentrate their portfolio in public debt.

In addition to the thorough restructuring of the banking sector, a series of complementary regulatory measures was also decreed in late 1995. The measures included the establishment of a deposit insurance fund (guaranteeing up to twenty thousand *real* per depositor) and increased capital requirements for establishing new banks. Separately, new Central Bank regulations aimed at promoting accountability and avoiding bailouts by ensuring that the shareholders of institutions sold or transferred were liable for any previous wrongdoing.

Perhaps the most significant of these additional measures was the law giving the Central Bank authorization to preventatively restructure financial institutions that were not meeting system requirements or were demonstrating financial problems. While a form of this law had existed previously, and the Central Bank was authorized to place banks under one of three forms of special regime (temporary system of special administration, intervention, or extrajudicial liquidation), these laws lacked a preventative character. Now the Central Bank was empowered to prescribe preventative remedies (e.g., increased capitalization, transfer of stockholder control, or mergers and acquisitions) for faltering banks, and certain assets of failing banks could now be confiscated.²⁰

Being in constant banking difficulties since 1995, Mexico has had one of the longest and most painful processes of restructuring after its 1994 crisis. Like in Brazil's PROER, this restructuring has been done through mergers and acquisitions, very often through an increase of foreign participation in the domestic sector. As in the other cases, this process has increased the concentration of the banking system as part of a policy to enhance the stability and to improve the efficiency of the sector.

¹⁹ The public banks in Brazil suffered significant losses with the decline of inflation. First, they were by far the greatest suppliers of loans in the system (over 75 percent in the 1990s) when inflation gains ceased. Second, the increase of interest rates and the expansion of primary deficits increased state and municipal debts substantially after 1992, and public banks are the main financiers of such debts in Brazil.

²⁰ As a result, 205 financial institutions have been taken over or intervened in one form or another by the Central Bank since the start of the *Real Plan*; some 25 percent of those institutions were banks. Overall, 92 percent of these financial institutions were closed, and 65 percent of the intervened banks were closed since mid-1994. The number of banks in operation also fell since the *Real Plan* began, after having risen sharply since the 1988 Constitution established universal banking in Brazil. The number of banks in operation more than doubled between year-end 1988 and 1993. However, in the three-year period between year-end 1994 and 1997, the number fell 12 percent from 246 to 219. Interestingly, the number of banks had remained relatively stable during the "lost decade" of the eighties, ranging from 108 and 116 institutions in operation between 1980 and 1987 (Stuart and Hermann 2001).

Due to this long (and costly) process of bailing out and restructuring the banking sector (McQuerry 1999), only in December 1998 was a financial legislation approved by the Congress and then implemented. In addition to the introduction of a new program of refinancing bank-rescue debt and of asset recovery and stricter limits for bailout burden, important changes on prudential regulation were introduced. The following are chief among these changes:²¹ (1) the creation of a new deposit insurance, which replaced the de facto unlimited deposit insurance that existed previously and increased the oversight of the deposit-insurance operation; (2) new and stricter accounting standards, which increased the transparency of credit operations both for supervisors and the public, imposed stricter standards for handling past-due loans, and substantially increased loan-loss provisions; (3) a series of measures aimed at improving lending practices, and new laws on credit transactions, aimed to speed the process of foreclosing on assets and to allow for a wider range of property to be used as collateral; and (4) stricter rules on capital quality. In addition, to reduce possible future increases of exchange rate mismatching, the Bank of Mexico established ceilings on foreign currency liabilities (according to their capital) and imposed compulsory liquidity coefficients in foreign currency according to both the size and the maturity of these liabilities (Yacamán 2001, 109).

Changes in the Structure: Following the International Trends? In the process of restructuring the banking sector in the 1990s, one key element was the deepening of the integration of the system with the international financial market—further stimulated by the entry of international players. This process of integration has increased the competition and further exposed the system to the new structure and practices in the banking business internationally. Understanding such changes, and the pace in which they are implemented in Latin America, is one of the main ways to assess the recent and potential performance of the sector.

In most mature economies (especially the United States), the banking changed dramatically in the 1980s and 1990s as a consequence of domestic deregulation and external financial liberalization.²² At least five strong trends are observed.

First, a well-known process of intermediation occurred: the traditional banking institutions were transformed into new financial services firms—including institutional securities firms, insurance companies, and asset managers. In addition, nonbank financial institutions—such as mutual funds, investment banks, pension funds, and insurance companies—began actively competing with banks both on the asset and liability sides of banks' balance sheets.

Second, the deregulation and growth of institutional investors—in particular pension funds and insurance companies—have made their role in the provision of loanable funds more prominent.

The mere fact that new financially “heavy weight” agents (investment banks, mutual funds, and institutional investors) were allowed to expand their securities trading led to a rapid growth of prices in the secondary markets. This created a virtuous circle of expansion of asset

²¹ For a detailed analysis of these changes, see EIU (2001, 9–10).

prices and markets: as financial wealth increased, investors' expectations were fulfilled, leading to further rounds of financial investment.²³

Third, external liberalization and significant improvements in information technology have increased across-the-border dealings of securities and the internationalization of the financial business.

Fourth, there has been a process of consolidation of the financial systems in mature economies.²⁴ That is, in the 1990s there was a high level of mergers and acquisitions (M&A) activity among financial firms, with a noticeable acceleration in consolidation activity in the last three years of the decade. As a result, a significant number of large, and in some cases increasingly complex, financial institutions have been created. Most M&A activity during the 1990s in the financial sector involved banking firms, which accounted for 60 percent of all financial mergers and 70 percent of the value of those mergers. In addition, the number of joint ventures and strategic alliances increased over the 1990s, with especially large increases in the last two years.

Finally, as a result of this process of consolidation, the number of banking firms decreased in almost every country during the decade, and the concentration of the banking industry, as measured by the percentage of a country's deposits controlled by the largest banks, tended to increase. If other banking activities, such as off-balance sheet activities, were included in the survey, the increase in banking concentration would be even greater.

The banking sector in many Latin American economies seems to be following these trends, due to the rapid process of opening and integration of domestic banks to the international markets.²⁵ However, the initial conditions were significantly different from the macroeconomic environment, and changes lagged behind for almost a decade in relation to financial markets in mature economies. Thus, in contrast to what happened in developed economies, and like in most developing economies (Beck et al. 2000), in Latin America the expansion of banking activity has been very modest (to say the least)—Chile being the only exception. Indeed, the banking sector remains relatively small (see

²² For a more detailed description of the changes in the financial systems of mature economies, see inter alia BIS 1986, Franklin 1993, Feeney 1994, Helleiner 1994, Bloomenstien 1995, and Group of Ten 2001.

²³ Not surprisingly, the total financial assets in the hands of institutional investors almost tripled from 1987 to 1990, and again almost doubled from 1990 to 1996 (Studart 2001, Table 1). In addition, evidenced by Fornari and Levy 1999 the gross financial assets of the G6 doubled as a proportion of GDP between 1980 and 1994, whereas the liquidity of these assets increased substantially. Just to give a measure of this trend, from 1989 to 1993, the outstanding amounts of debt securities issued in OECD economies increased over U.S.\$ 6 trillion and more than doubled from 1989 to 2000 (Studart 2001, Table 2).

²⁴ For a thorough analysis of the causes and consequences of such a process, see Group of Ten 2001.

²⁵ Indeed, the surge of capital flows to developing economies in the 1990s is directly associated with the process described above. First of all, the rapid growth of financial wealth in the hands of private financial investors increased the demand for "risk diversification". This explains in a great extent the expansion of a variety of specialized securities markets in mature economies - especially in the US -, from investment asset-based securities (for instance, mortgage-based securities) to *junk bonds*. This search for risk diversification also explains a great deal of the expansion of across-the-border securities dealings, and the development of foreign-asset based securities (such as ADRs and GDRs) in the "international" markets - as for instance happened with the asset-based securities issued in securities markets.

Chart 1),²⁶ lends relatively little; concentrates its operations in short-term activities, including the refinancing of government debt; and is highly vulnerable to external shocks.

In addition, the supply of loanable funds to specific sectors continues to be highly rationed.²⁷ This implies that the credit market is *supply-constrained* for many sectors, and these expenditures tend to be highly sensitive to changes in the supply of loanable funds. Net interest margins in the banking sector are still much higher than those found in developed economies (see Chart 2), an indication of very high *spreads*, leading to noncompetitive financial costs to the domestic corporate sectors and high levels of self-finance (which is a deterrent to economic expansion).²⁸

From this description, it may seem that Latin American financial systems in the early 1990s continued to suffer from structural problems similar to those described by Raymond Goldsmith (1969) in the 1960s.²⁹ But this is far from true: at least four important changes have occurred in recent years.

First, the existing banks have been allowed to enter new activities, resulting in the formation of so-called universal banks. As a result of deregulation, there has been an increase in bank operations into securities trading, insurance, and real estate activities, plus banks are now allowed to own nonfinancial firms. This is a trend that has moved in tandem with events in mature economies,³⁰ but unlike some of the latter, as seen above, Latin American securities markets remained small, and the *primary markets* actually shrank in the 1990s (cf. Dowers et al. 2000),³¹ implying that the expansion of banking business toward other financial activities has also been limited.

Second, foreign institutions have become increasingly significant actors in the financial sector. This is an overall trend in developing economies, but it has been especially prominent in Latin America (World Bank 2000, 155–58). As can be seen in Table 1, foreign assets as a share of total assets have risen substantially in Argentina, Brazil, Chile, Colombia, Mexico, Peru, and Venezuela.

This increase in participation of foreign ownership implies that the role of Latin America in the strategy of multinational banks (MNBs) has increased, as indicated by Table 2, Latin American economies have been by far the most rapidly growing market in developing economies

²⁶ In Charts 1 and 2 the circles comprise a significant part of Latin American economies of our sample, as an indication of the comparative stage of development of financial systems in the region vis-à-vis mature economies and even some developing economies.

²⁷ Rationing is particularly acute for popular house financing, SME and poor consumers, and long-term productive investments.

²⁸ Even though it is possible to reduce such spreads through specific policies, as the recent Brazilian experience shows (BCB 2000), these spreads seem to be highly related to the shallowness of credit markets in developing economies, as indicated by Chart 2.

²⁹ As a matter of fact, they continue to suffer from these problems to this date.

³⁰ On these trends see Feeney 1994, Blommestein 1995, Fornari and Levy 1999, and BIS 2001a.

³¹ In Latin America, the external financial opening and domestic financial deregulation did change some microeconomic structural problems. But the structural problems described above remained (Beck et al. 2000). This is not surprising: as discussed in Studart 2000, overcoming these structural problems requires long-term financial and institution-building policies.

for MNBs. Another interesting feature shown by this table is the increase of domestic intermediation undertaken by such banks in these markets, as the significant rise in claims on domestic residents goes in tandem with the rise of the liabilities obtained in domestic markets of Latin American economies.

A third trend observed is the increase (albeit small)³² in concentration of ownership in the sector, as a result of the processes of mergers and acquisition (including privatization), often by foreign banks and large domestic conglomerates (Table 3). Even though, as mentioned above, this rise in concentration does present challenges for regulation and supervision, it is also true that in order to compete in a more internationally integrated banking system, larger and stronger banks are often needed.

And, fourth, there has been some diversification with respect to the development of capital markets. This development has multiple causes: (1) increase of portfolio flows to the region, up until 1998; (2) the privatization of social security and the deregulation of private institutional investors, which led to an increase of investments in securities; and (3) the virtuous circle created by the process of stabilization and securities market expansion in some economies in the region (Table 4). It is important to mention again, however, that even though there has been some diversification of universal banks in the region into securities markets, this has been limited in most Latin American economies, with the exception of Chile.

Stability and Provision of Credit

The relation between regulation and supervision (R&S hereafter) and stability is a complex one: even though good R&S is a requirement for a stable banking sector, the procyclicality of the banking sector makes even the best regulated and supervised systems vulnerable to unexpected changes in some key variables, such as interest rates, levels of aggregate production, and employment and exchange rates.³³ The relation between stability and the expansion of the banking sector is more straightforward: stability is a necessary, though not a sufficient condition,

³² The increase in concentration has not been larger because much of the acquisitions of domestic banks by foreign banks took place in the process of privatization, and public banks in many economies were very large prior to privatization (and some continue to be).

³³ There is a good deal of evidence that financial activity is highly procyclical (see Borio et al. 2001; BIS 2001c). This problem goes beyond the usual asymmetric information problem and has to do with at least two facts. The first is that improvement of confidence tends to generate a self-fulfilling process of changes in asset prices: as investors are more optimistic about these prices, they expand their holdings of such assets at a pace that is far more rapid than that of the supply of those assets. Booms in asset prices then tend to corroborate past expectations, leading to further optimism. Individual risk assessment thus tends to change given the state of collective enthusiasm. The question of managing risk *ex ante* is evidently at the heart of regulation and supervision. But given that lending activity is a forward-looking activity, assessing risk by the usual statistical means (frequency distribution of past events) is usually applicable only to a stable environment. Many authors (e.g., John Maynard Keynes 1930; Hyman Minsky 1982) had already claimed that, given the forward-looking nature of risk assessment, expectations are normally formed not only taking into account past frequency distributions but also the confidence applied to the use of such distribution as a correct guidance to future events. Thus the “expected risk” is basically obtained by multiplying the statistically determined risk by this weight.

for the *sustained* growth of supply of domestic credit to the private sector. Bearing in mind this relationship, in this section I make the point that even though until recently the banking sector in the four economies under analysis became more stable, due to their improved regulation and supervision, only in Chile did the macroeconomic conditions allow for a sustained growth of the sector. This claim, as I will discuss in the conclusion, is a central point in assessing the potential performance of the sector in the years to come.

How Much Have Regulation and Supervision Improved after the Tequila Crisis?

Given that good R&S is a necessary, but not sufficient condition for stability of the banking sector, in order to address the question posed in the subtitle above, we must have some indicators of the current quality of R&S. This is a difficult task, due to the qualitative nature of most changes in R&S implemented in Latin America in the 1990s. Nevertheless, drawing on an important new data bank created by the World Bank,³⁴ we can sketch out the current situation with respect to regulation and supervision of the banking sector in the four economies under analysis. Unfortunately, this database represents a single point in time (circa 1999), so we must rely on qualitative studies of the region itself to identify changes and tendencies. In general, these sources point to substantial improvements, although with important differences remaining across countries.

Table 5 provides a set of indicators on banking regulation in seven Latin American countries, plus the United States as a benchmark. The most widely known indicator is the minimum capital-asset ratio requirement, currently set at 8 percent by the BIS through the so-called Basle I agreement. While the United States sets its minimum at the 8 percent level, as do Chile and Mexico, the other Latin American countries have higher ratios, with Brazil and Argentina at the top of the list with 11 and 11.5 percent, respectively. A similar situation is found with the actual risk-adjusted ratio. With the exception of Bolivia, all Latin American countries maintain higher ratios than the 12 percent found in the United States. Again, Argentina and Brazil have the highest ratios.³⁵

Three indexes are also presented in Table 5. The “capital stringency” index includes adherence to the BIS guidelines, but also various measures of the degree to which leverage potential is limited. With a range from 1 to 6, where 6 is the most stringent and the U.S. benchmark is at 4, only Argentina among the four Latin American countries has a score of 6. The “capital regulation index” combines the previous index with one measuring the type of assets that can count toward the capital-asset ratio, with a range of 1 to 9. On this indicator, Argentina represents the highest degree of stringency, followed by Mexico, with Chile at the rear. The fifth indicator deals with types of activities that banks can engage in and restrictions on who can own a

³⁴ See Barth, Caprio, and Levine 2001a for a description of the database, which was constructed from a survey of bank regulators and supervisors in 107 countries. A companion paper (Barth, Caprio, and Levine 2001b) presents a preliminary analysis of the data, which questions the relevance of the regulatory and supervisory guidelines stressed in this chapter. I believe that the conclusions reached by Barth et al. owe to the failure to distinguish between developing and developed countries, whose experiences have been quite different with respect to the behavior of the financial sector. I intend to test this hypothesis in future research.

³⁵ ECLAC has often advocated that developing countries should maintain ratios above the international norm, given the extremely high cost of banking crises. See ECLAC (2001).

bank. This qualitative index ranges from 1 to 4, with the United States at 3. Argentina allows the greatest freedom to banks, while Mexico was then the most restrictive.³⁶

It is clear from the data presented in Table 5 that regulation has many dimensions, with some countries being stricter with enforcing some than with others. Nonetheless, there is some tendency for a cross-country pattern to emerge. As a way of measuring this tendency, I have constructed an additional index (the Overall Regulation Index, ORI) by dividing the values in each row of Table 1 by the average of that row and then summing them up by country. Chart 3 presents the result of such recalculation.

Table 6 uses the same data source to examine trends with respect to bank supervision. While more attention is typically devoted to the topic of regulation, the best regulations are of little use if they are not enforced. Whether this be self-supervision or supervision carried out by a government body, the point is that provision for the implementation of regulations must be separately analyzed.

The number of professional supervisors per bank varies widely, from 0.1 in the United States to 11.5 in Mexico, but there seems to be only a very weak relationship between the number of supervisors and their attributes as measured by the “official supervisory” index. The latter indicator is the summation of sixteen measures of supervisory power to deal with abnormal situations encountered and the degree of discretion they have under such circumstances—the less the discretion and the greater the power, the higher the index. With the United States at fourteen, only Brazil has a higher ranking, while Mexico is the lowest. A subset of the sixteen items on the supervisory power index is found in the index of “supervisory forbearance discretion.” Argentine supervisors have the least discretion, while Chilean supervisors have the most. The United States is in the middle.

The last two items in Table 6 deal with what the World Bank calls private monitoring. The index on this topic measures whether an external audit is required, the percent of the ten largest banks that are rated by international rating agencies, the degree of accounting disclosure and director liability, and the lack of an explicit deposit insurance scheme. On a scale of 1 to 8, the United States, Argentina, and Chile score 8, while Mexico is the lowest at 6. The percentage of top banks rated by international agencies shows the United States, Argentina, and Brazil at 100 percent, while the other countries in the sample are between 20 percent and 50 percent.

To present a clear view of the degree of supervision in each economy, I have created an Overall Supervision Index (OSI), following the same methodology used to construct the ORI with only one additional procedure. To make all variables more compatible, I have reversed the values of the variable “Likelihood Supervisors Moves in Banking,” as the higher the probability of that occurring, the more easily supervisors can be captured by supervised banks and thus the less rigid the supervision will be. Chart 4 presents the values for OSI across the countries in the sample.

Chart 3 shows that Argentine regulation is the strictest, followed by Bolivia; surprisingly, Chile is the least restrictive. Nonetheless, it is important to note that the United States has a lower

³⁶ Due to the recent sale of BANAMEX to CITICORP, Mexico has become the leader in this index.

level of restrictions than do any of the Latin American countries in the sample. As shown in Chart 4, the United States ranks lower than the three highest-ranking countries.³⁷ Given that the United States has a much better record of financial stability than any of the four Latin American economies analyzed, this result is a puzzle to which I shall return in the conclusion.

For the purposes of this section, it is important to notice that in 1999 the four Latin American countries already had quite good levels of R&S. Given that from 1999 many improvements in R&S have been made in the four Latin American economies—and in particular in Argentina, Brazil, and Mexico—it can be deduced that the tools for strict prudential regulation and supervision are all in place in these countries.

In sum, since the Tequila Crisis, regulation and supervision in the Latin American banking sector have conformed significantly to those of mature economies. Regulation and supervision and thus the potential stability of Latin American banking systems have greatly improved.

Credit conditions. The analysis above indicates that financial regulation and supervision of the banking systems of the four countries—as well as of most of the region—have become significantly stricter. In addition, it seems that the *modus operandi* and lending practices of the local banks have been changing in tandem with those of mature economies, albeit at a much slower pace. Despite these clear improvements, except for Chile the recent performance of the banking sector has been quite disappointing.

In Argentina, total lending and lending to the private sector increased in dollar terms until recently, but this trend reversed from 1999 onward (Chart 5a). Chart 5b indicates an even more worrisome aspect of the performance of the banking sector: not only is total lending to the private sector as a percentage of GDP very low (around 20 percent currently), but it has been shrinking since 1999. In addition, even though the intermediation spreads are relatively low, they have stagnated at very high levels (Chart 5c), despite the increase in competition due to the entry of

³⁷ The data presented in Tables 5 and 6 have at least two important problems. First, they represent only a single point in time and, second, they are overview measures that must summarize a large amount of information in a single number. To get a better idea of some of the details as well as the changes in the regulatory and supervisory systems in recent years, we have to turn to studies of the region. In one of the most important studies, Aguirre (2000) stresses that important changes have been made in banking legislation in almost all of the seventeen countries he surveyed. In general, he says, these changes have come about as a result of crises or serious problems in the respective banking systems. Aguirre identifies key changes such as less public-sector ownership, greater foreign participation, broader scope for banking activities, and improvements in supervisory and regulatory authority. With respect to the latter, he focuses mainly on institutional aspects, such as the agency that performs supervision and the scope of the mandate of such institutions (only banks, or also insurance and securities). He finds a wide difference across countries but admits that the literature is not conclusive on the relative merits of different systems. Another study, by Livacic and Sáez 2000, focuses specifically on supervision. Again, noting the improvements during the 1990s, they emphasize the gap between the rules on the books and the ability of supervisors to enforce them. Examples include loans to “related” clients and the treatment of overdue loans on banks’ books. The authors suggest various remedies, including the need for more resources (financial and human) and greater autonomy for supervisors.

foreign banks and the openness of the banking sector and the decline of past due loans from 1995 onward (Chart 5e).³⁸

Another relevant aspect of the recent performance of the Argentine banking sector is that the exchange rate exposure of Argentine banking, which was already high in 1994–95, continued to rise (Chart 5d).³⁹ This trend reflects the remaining confidence in the then existing exchange rate regime, and also seemingly the increasing share of foreign banks in total assets of the sector. These trends seem to be highly determined by increasing uncertainties due to the difficulties faced by that economy since January (with the devaluation of the Brazilian *real*)—difficulties that can be summarized by the negative growth performance (Chart 5f): the banking sector has become more cautious, whereas the demand for credit has been reduced due to the decline of activities since 1999.

In sum, regulation and supervision in Argentina should have improved the banking sector stability, and the sector did become more efficient after 1994–95. However, on the one hand, the macroeconomic environment has delayed the recovery of banking activity. On the other hand, the consequences of a significant change in the exchange rate regime on the stability of the system can be potent: if the existence of foreign banks increases the confidence of depositors in their capacity to honor their dollar deposits, it is also true that, given the current level of dollarization of the Argentine banking sector, any change of the current exchange regime would significantly increase past due loans and also the default risk on public dollar-denominated bonds. If this deterioration of bank assets occurs with continuing loss of deposits, the foreign-owned banks may be forced to obtain additional funding from their stockholders. But given the risk of greater exposure and the current rules in mature economies concerning the existing rigid capital requirements, this additional funding may be difficult to obtain.

The performance of the banking sector of Brazil also shows some improvements, but also some very worrisome features. First of all, after the rapid growth of lending in the first half of the 1990s, lending to the private sector was almost stagnated from 1997 onward and actually began to shrink in 2000 (Charts 6a and 6b).

Regarding the costs of borrowing, the picture is even more worrisome. Spreads in the Brazilian banking sector were already outrageously large before 1994, and indeed they began to decline after 1995. From 1999 onward, the Brazilian Central Bank (BCB) introduced several measures to reduce these spreads, including a significant decline in reserve requirements, reduction of taxation on bank operations, and an increase of the disclosure of interest rates charged by different banks. In addition to these measures, BCB expected that increased participation of foreign banks and the higher competition would lead to further reduction of the

³⁸ There has been a slight increase in past due loans since 1999, which indicates, not surprisingly, how sensitive this measure is to changes in economic activity, which, as indicated in Chart 6f, declined in the same period.

³⁹ As measured by the relation between deposits plus other liabilities in U.S. dollars and total assets, the level of foreign currency exposure has been increasing since the early 1990s, culminating in ratios that were over 50 percent in 2001 (Chart 6d).

interest rates.⁴⁰ In sum, since 1995, spreads have been reduced significantly (Chart 6c). However, they seem to have stagnated at very high levels (around 30 percent) and recent BCB reports indicate that they are rising slightly again. The reasons behind these high spreads are interrelated: the remaining macroeconomic uncertainty and the high levels of past due loans. Indeed, despite the decline of past due loans since 1999 (mainly due to the brief recovery of the economy at the end of 1999 and in 2000), the relation between these past due loans and total loans of the banking sector remained on average above 10 percent in September 2001.

The case of Mexico is, in some aspects, similar to that of Brazil. As mentioned before, since the Tequila Crisis, the domestic banking system has been involved in a costly process of restructuring. Despite the good growth performance from 1996 onward, lending to the private sector in U.S. dollars declined significantly from 1994 to 1997 (Chart 7a). In addition, not only was there a substantial decline in percentage of lending to GDP from 1994 onward, but also this percentage remained almost stagnant at very low levels (less than 20 percent) until recently (Chart 7b).

Regarding the cost of borrowing (Chart 7c), even though the spreads are still very high (around 12 percent) they have declined substantially since 1995. But the fact is that, despite all the restructuring and increased competition (coming especially from the entry of new foreign banks) these spreads remain high and have shown no clear tendency to reduce since 1999.

At first sight, this trend seems paradoxical given the rapid decline of past due loans from 1998 onward (Chart 7e). But this paradox vanishes once one considers that the Mexican economy is again facing a deterioration of its growth performance (Chart 7f) and, due to the risks of recession of the U.S. economy, faces a possible recession in the near future.

Out of the four cases, Chile seems to have the best outlook. Since 1991, the Chilean banking sector has seemed little vulnerable to external shocks, as none of the external crises has affected its performance significantly. In dollar terms, total lending of the system and lending to the private sector have increased almost steadily from 1991—from U.S.\$ 15 billion in 1993 to around U.S.\$ 40 billion in 2000 (Chart 8a). This growth was also reflected in the rise of the percentage of lending over GDP, as shown in Chart 8b.

Chart 8c also shows a significant reduction of lending rates, even though the spreads remain impressively stable until the end of 1998, increasing slightly after 2000. Since 1998, past due loans have been increasing (Chart 8e), especially due to the deceleration of economic activity (Chart 8f), but so far they are irrelevant as a source of uncertainty for the sector.

Concluding Remarks

The process of liberalization and opening of the banking sector in Latin America since the 1970s has been a sad play of four acts: In the first act, the economies freed commercial banks to make their own decisions about borrowers, loan volume, and prices. At approximately the same time, in

⁴⁰ For a thorough analysis of the main determinants of spreads in Brazil and the policies introduced to reduce them, see BCB (2000).

a second act, capital account liberalization enabled local banks to engage in transactions in foreign currencies and allowed foreign institutions to enter local markets. Frequently such changes were made without having in place an adequate regulatory and supervisory system, which compounded problems for bankers without sufficient experience in credit analysis of local borrowers, not to mention the complexities of international financial markets. The typical results came in the third act: credit booms, often mismatches between maturities and currencies, followed by banking crises. In a fourth act, government enters the scene to rescue the sector, in the first instance through takeover of nonperforming loans, recapitalization of banks, and liquidations and mergers, usually involving foreign institutions.

In the 1990s, this play was again rehearsed in many economies in the region. But, in contrast to the experience of the 1970s, significant improvements were made. First, to prevent future crises, regulation and supervision were stepped up, greater information and transparency were required, and deposit insurance was sometimes put in place. In addition, four important trends continued after, and despite of, the Tequila Crisis: the establishment of universal banking, entry and/or expansion of foreign institutions, the slight increase in the concentration of ownership in the sector (as a result of the processes of mergers and acquisition, including privatization), and increasing diversification with respect to the development of capital markets.

The analysis of the recent performance of the banking sectors of four economies (Argentina, Brazil, Chile, and Mexico) after the Tequila Crisis reveals to some important lessons. First, in relation to the restructuring and regulation and supervision, as mentioned above, it is clear that the banking systems of these economies have improved significantly. Thus currently, various countries of the region seem well equipped with modern regulation and supervision to deal with the four trends and challenges mentioned above. In addition, the Chilean case clearly shows that these improvements are likely to result in lower vulnerability of these systems to possible external shocks.

Second, it is clear that even the best regulated and supervised banking sectors cannot cope with the abrupt and deep macroeconomic uncertainties and shocks that have been so common in Latin America in the recent past. In Argentina, in particular, even though the share of foreign banks in the assets of the system has increased, and banks have become more conservative, selective, and transparent, the increasing dollarization of their assets and liabilities made them highly vulnerable to potential changes in the exchange rate regime. Even mere changes in expectations about the sustainability of the peso-dollar parity could provoke significant withdrawals of dollar deposits (associated with capital flights), causing liquidity risks for the domestic banks. In addition, if the government chooses to react to such changes in expectations by raising interest rates and/or making further recessive adjustments, banks are hit by increasing default risks (as past due loans are likely to rise). The recent crisis in the Argentine banking sector, only halted by the ad hoc measures by the government to stop the rapid decline of bank deposits, shows that having a solid and sustainable macroeconomic environment is a strong condition for the stability of an active banking sector.

Third, regarding performance, the banking sector seems *potentially* more stable (due to better regulation and supervision and business practices) and thus better prepared to expand in a context of higher financial openness. However, the analysis also indicates that having potential does not by itself guarantee good performance in terms of provision of credit. Albeit more appropriately regulated and more efficient, further improvements of the performance of the banking sector are highly dependent on macroeconomic stability and growth. This is a precondition for the growth of credit to the private sector and for a sustained reduction of spreads, and thus borrowing costs.

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CHART 1

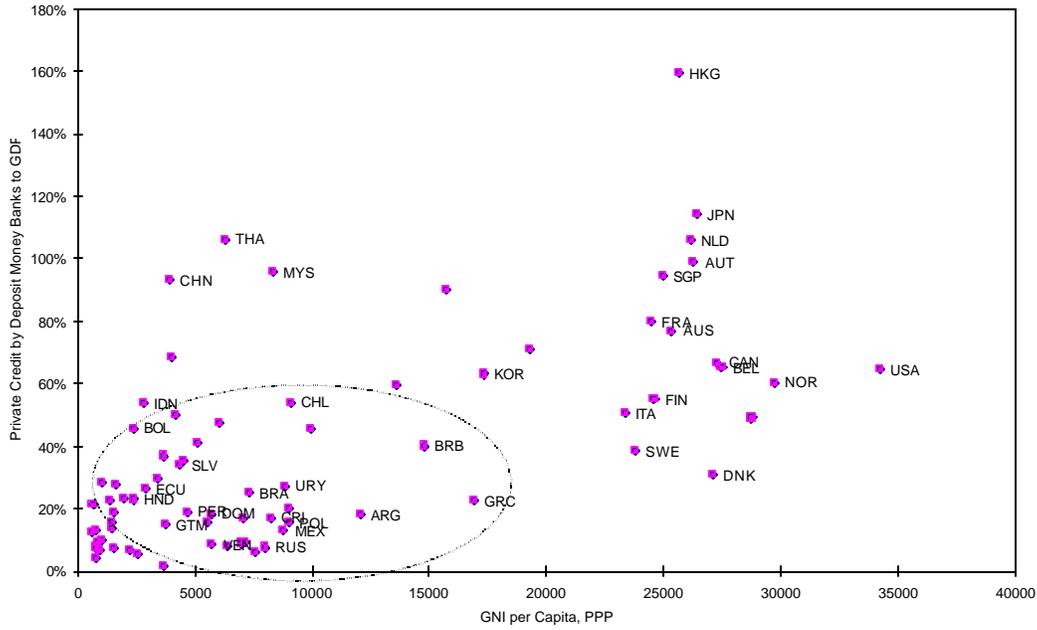


CHART 2

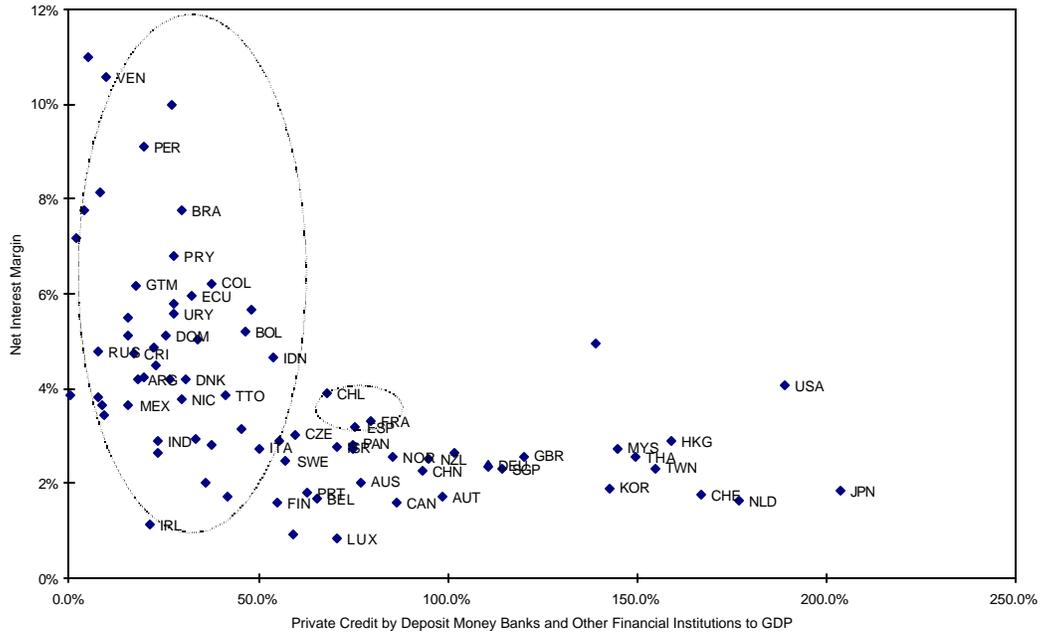
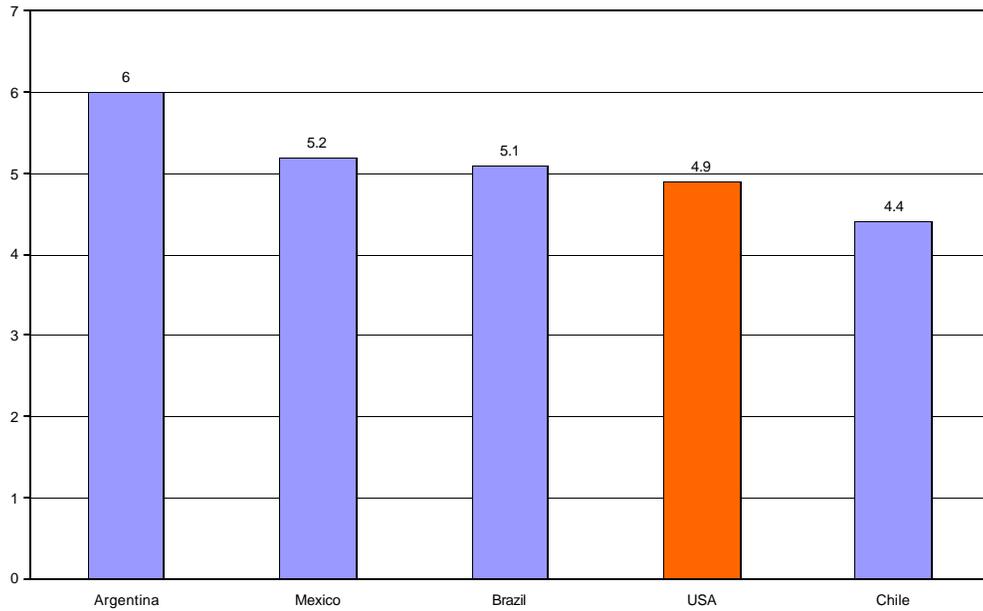
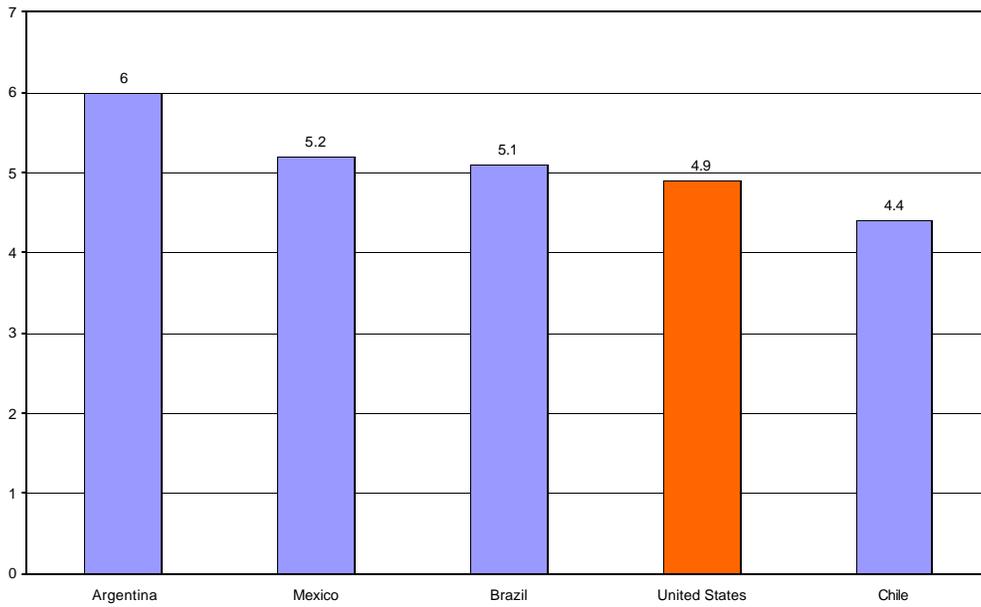


CHART 3: Overall Regulation Index (ORI)



Source: Elaborated by the author based on data from Table 1.

CHART 4: Overall Supervision Index (OSI)



Source: Elaborated by the author based on data from Table 6.

CHART 5a: Argentina—Total Lending and Lending to the Private Sector

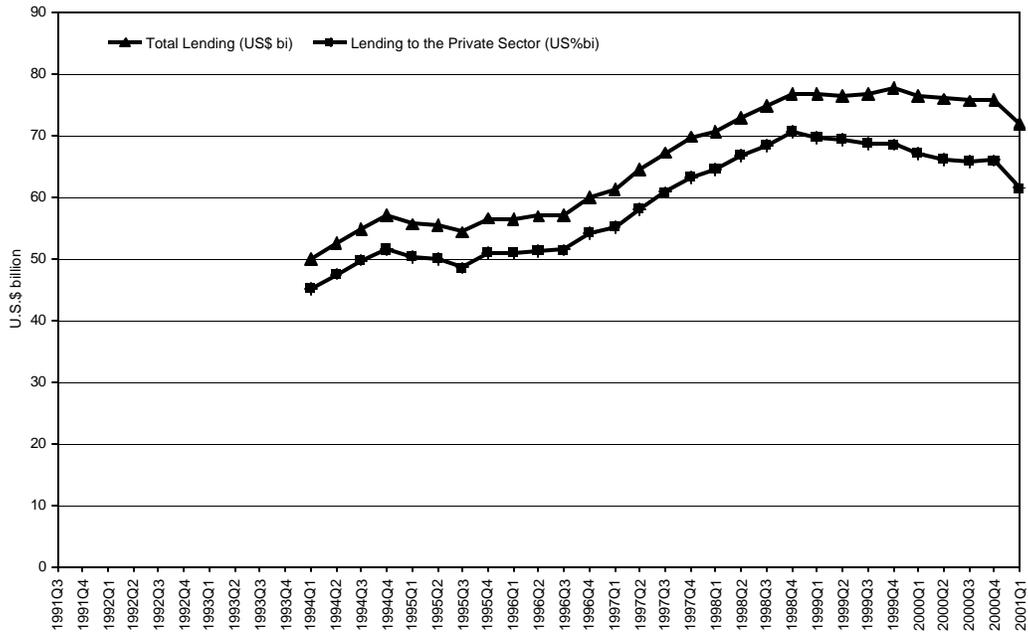


CHART 5b: Argentina—Total Lending and Lending to the Private Sector

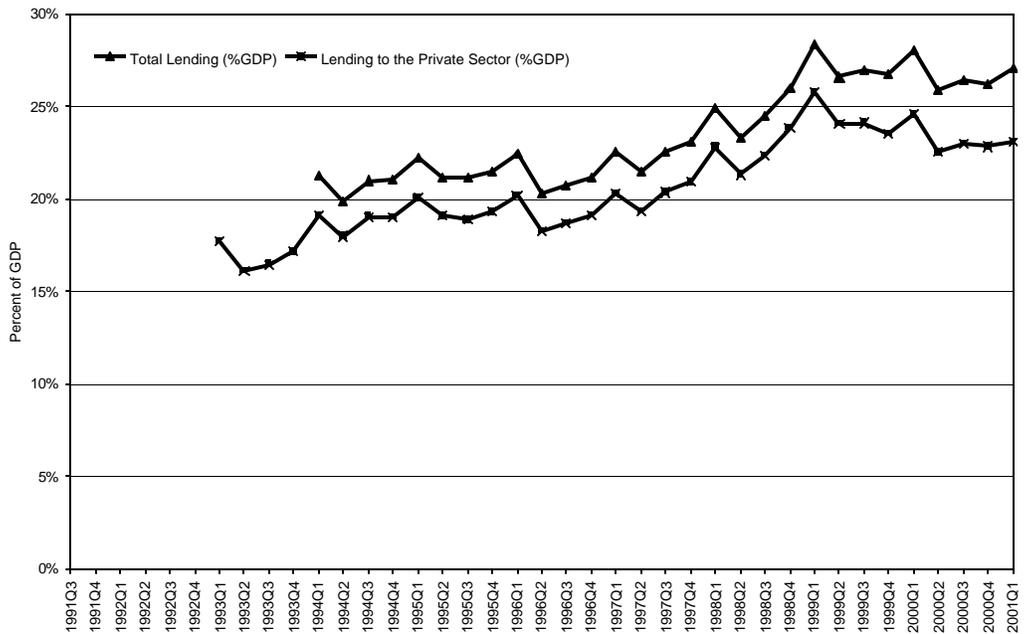


CHART 5c: Argentina—Interest Rates and Spreads (%a.a.)

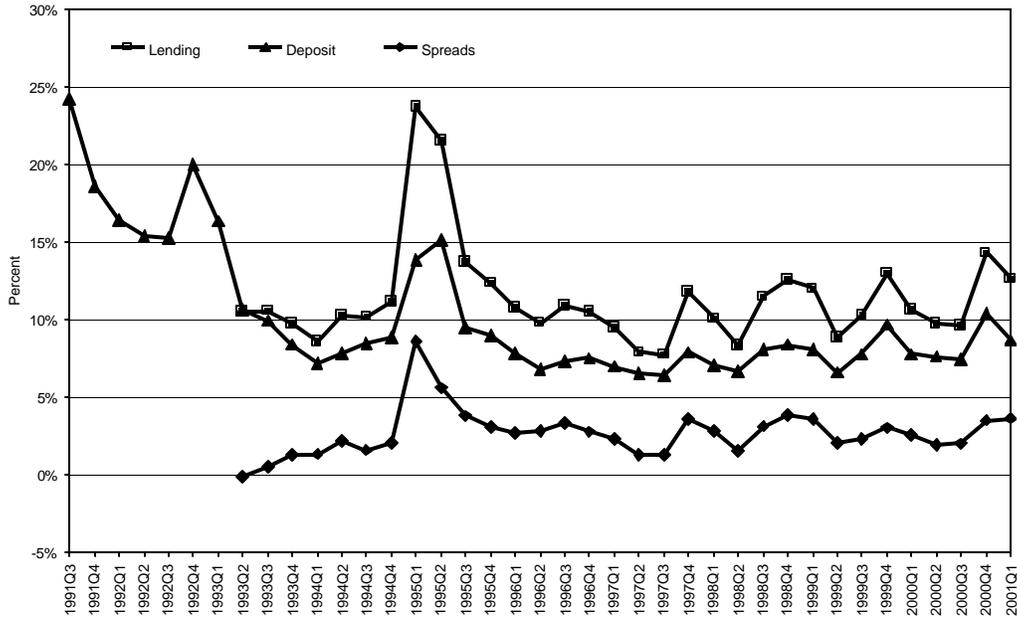


CHART 5d: Argentina—Foreign Exchange Exposure

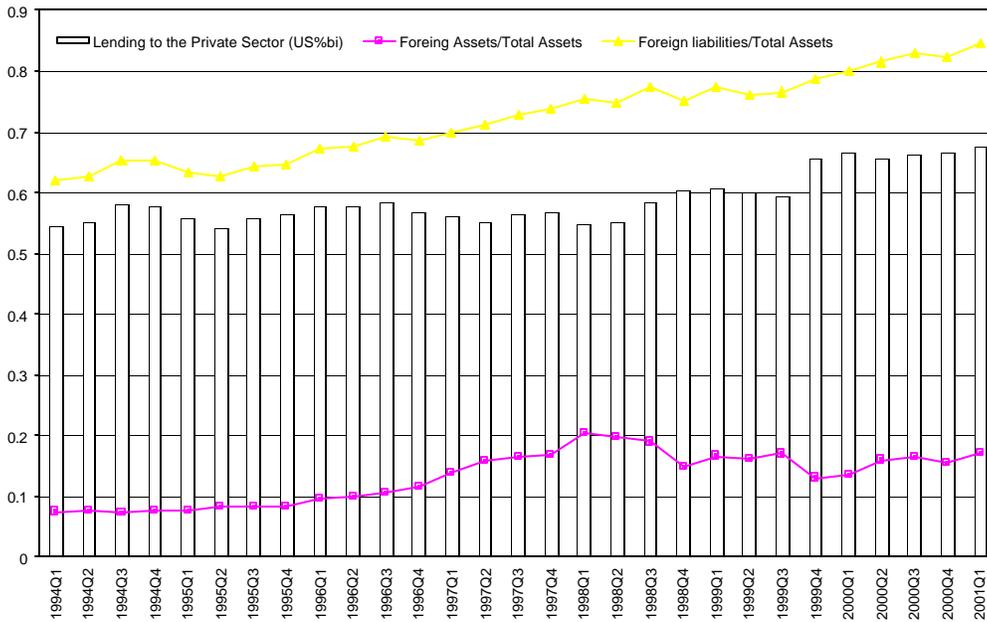


CHART 5e

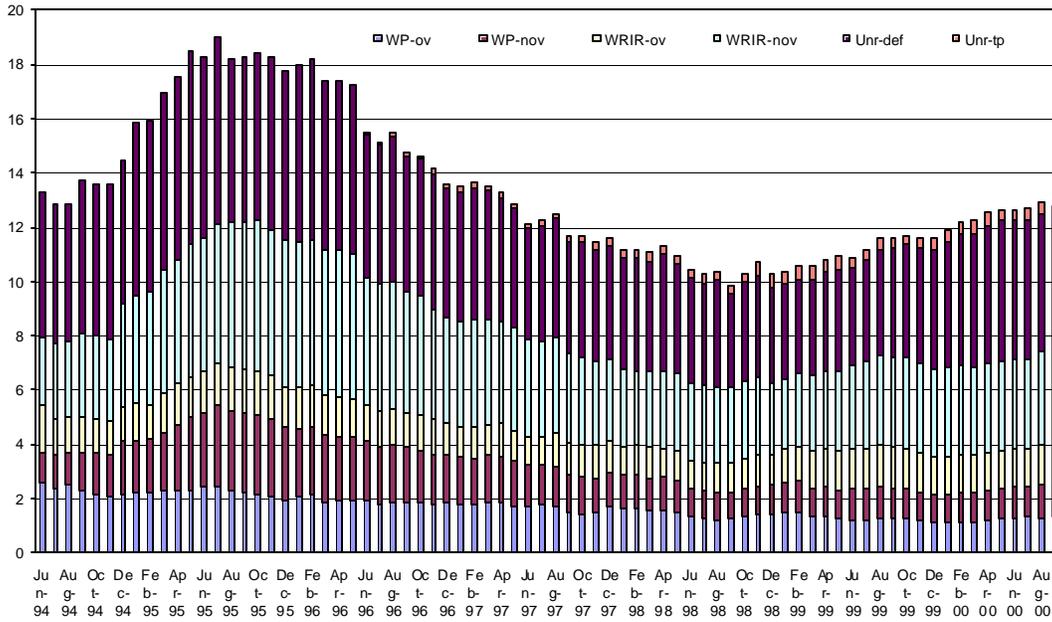


CHART 5f: Argentina—GDP Growth Rate

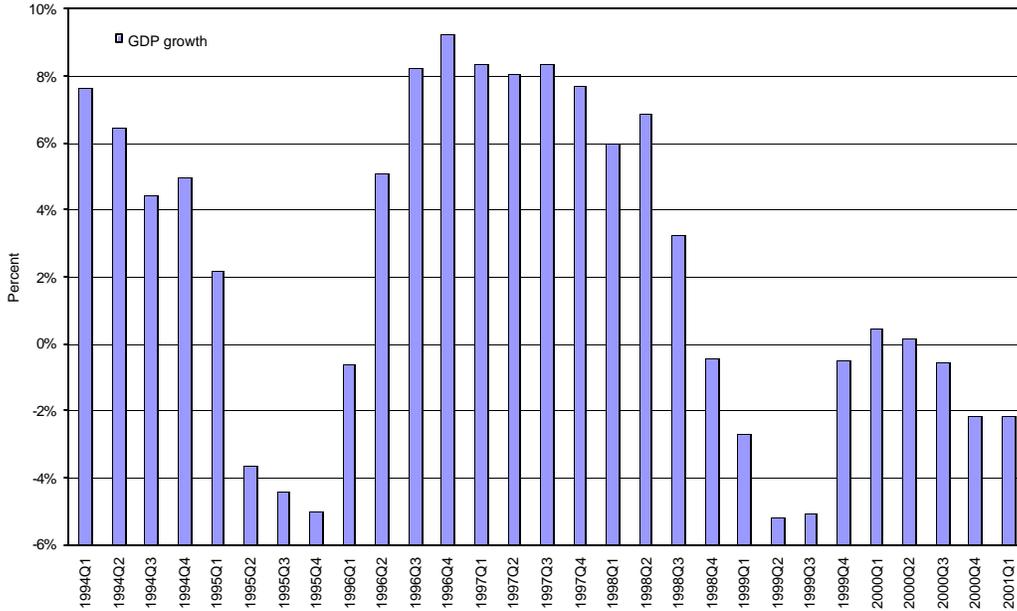


CHART 6a: Brazil—Total Lending and Lending to the Private Sector

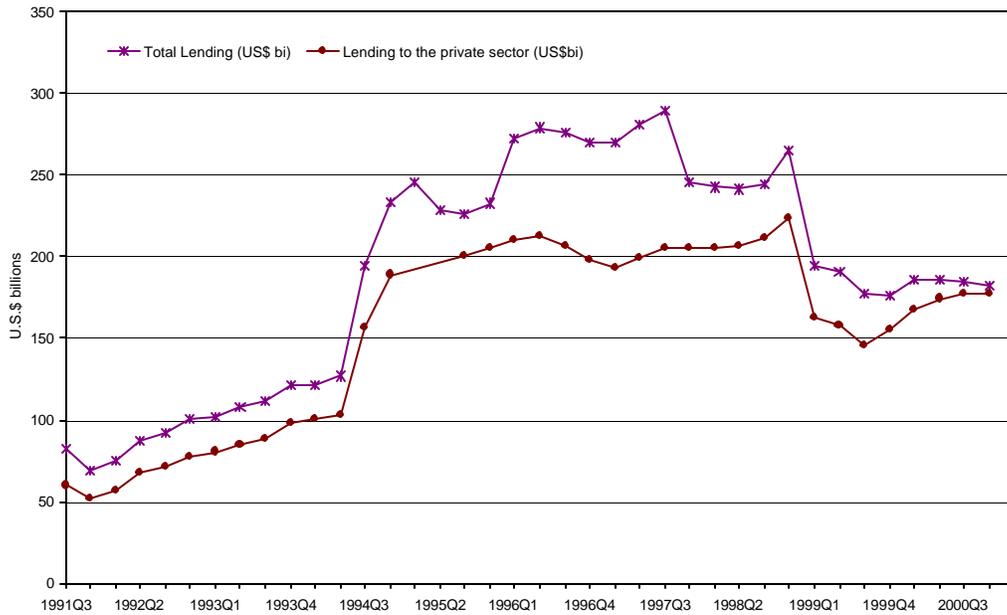


CHART 6b: Brazil—Total Lending and Lending to the Private Sector

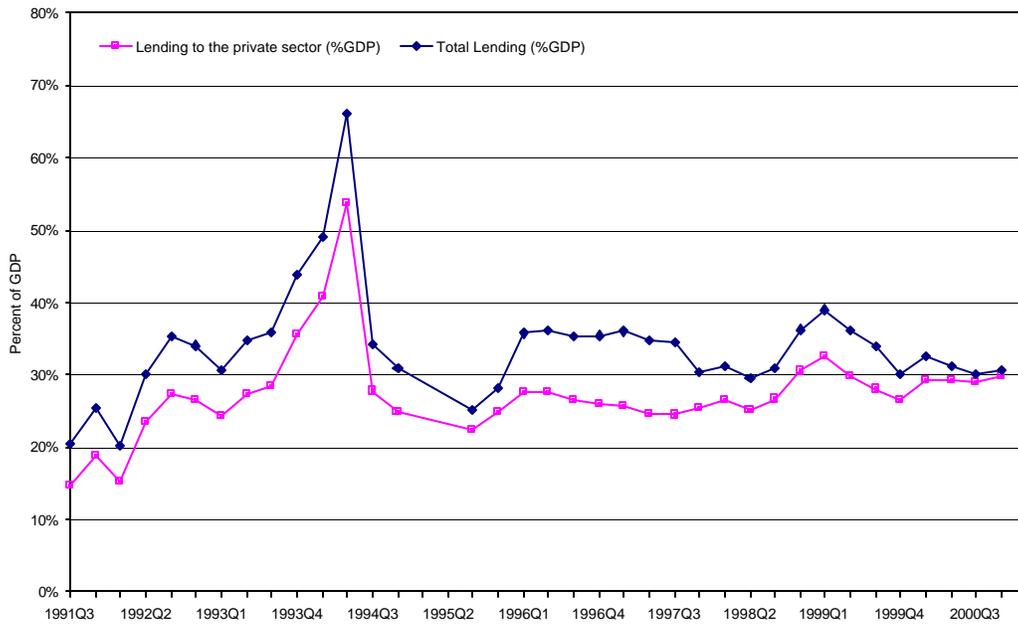


CHART 6c: Brazil—Interest Rate Spreads

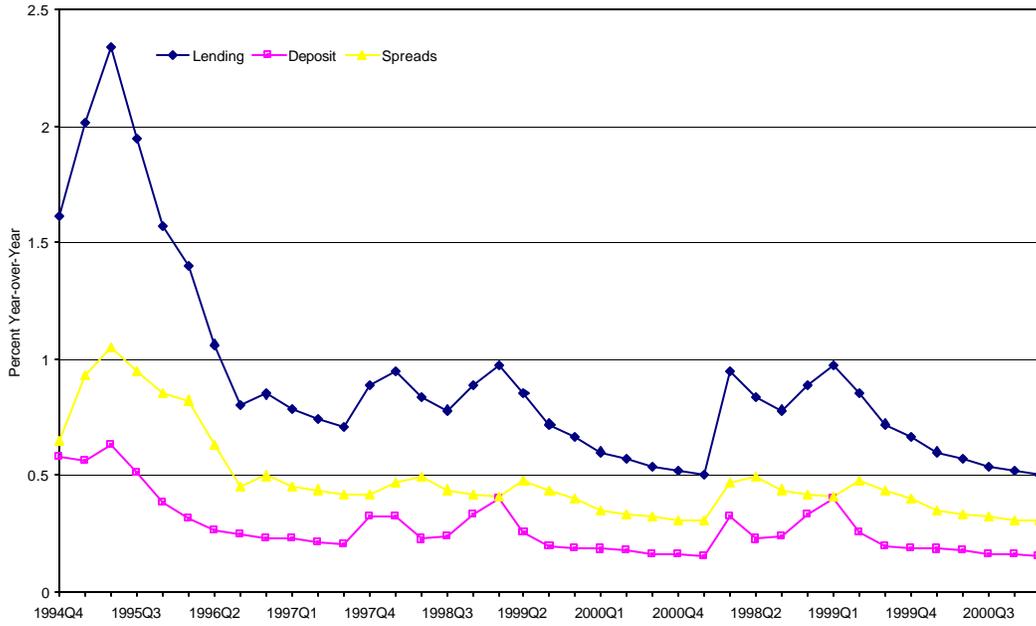


CHART 6d: Brazil—Foreign Exchange Exposure

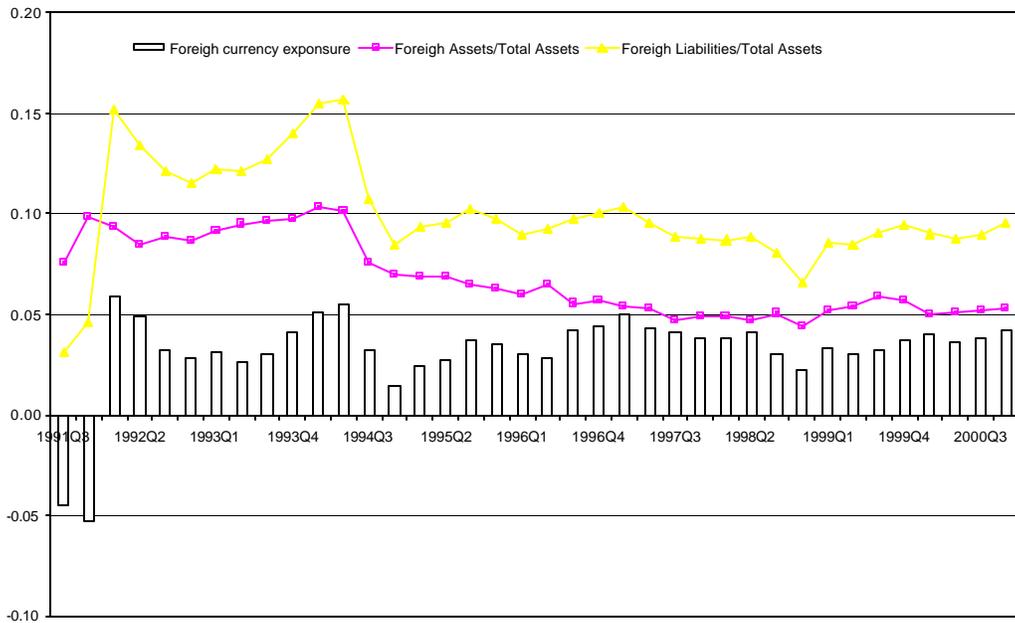


CHART 6e: Brazil—Past Due Loans

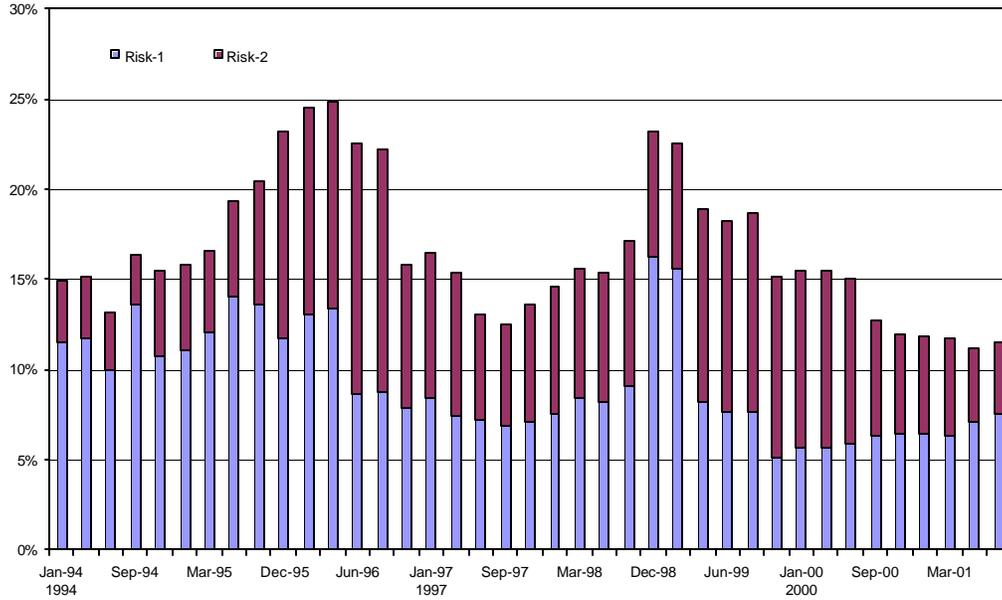


CHART 6f: Brazil—GDP Growth Rate

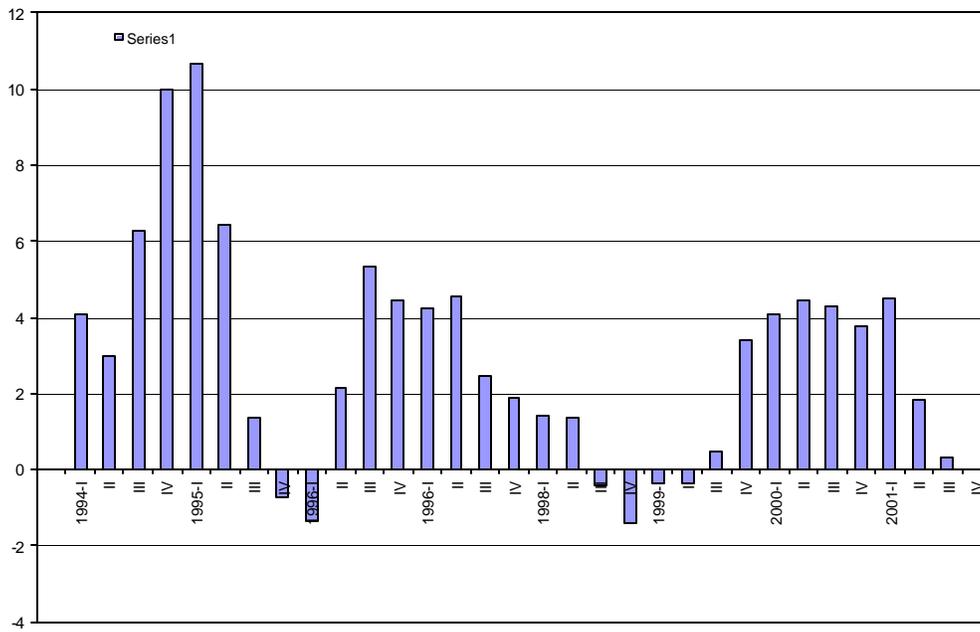


CHART 7a: Mexico—Total Lending and Lending to the Private Sector

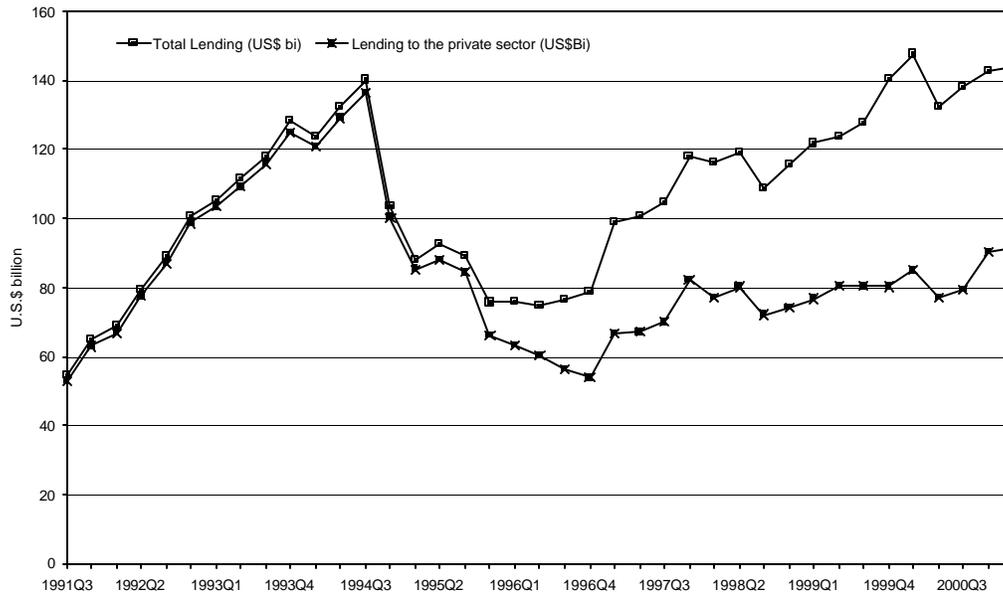


CHART 7b: Mexico—Total Lending and Lending to the Private Sector

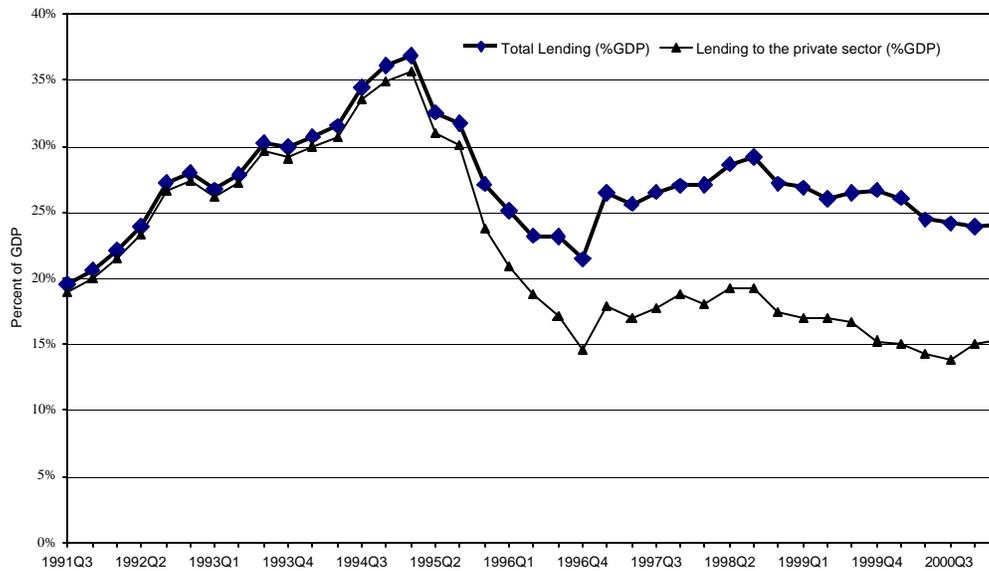


CHART 7c: Mexico—Interest Rates and Spreads

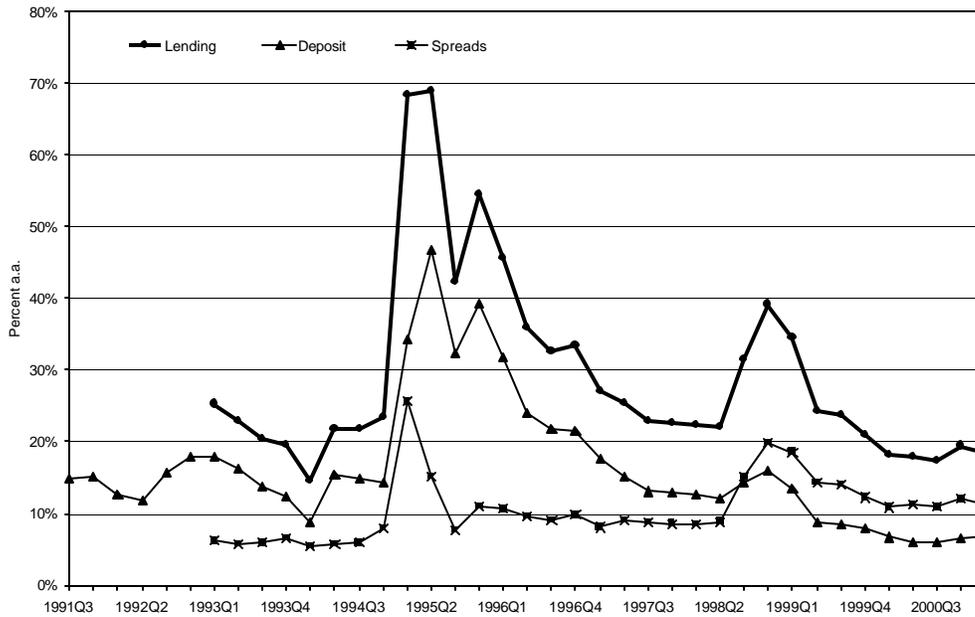


CHART 7d: Mexico—Foreign Exchange Exposure

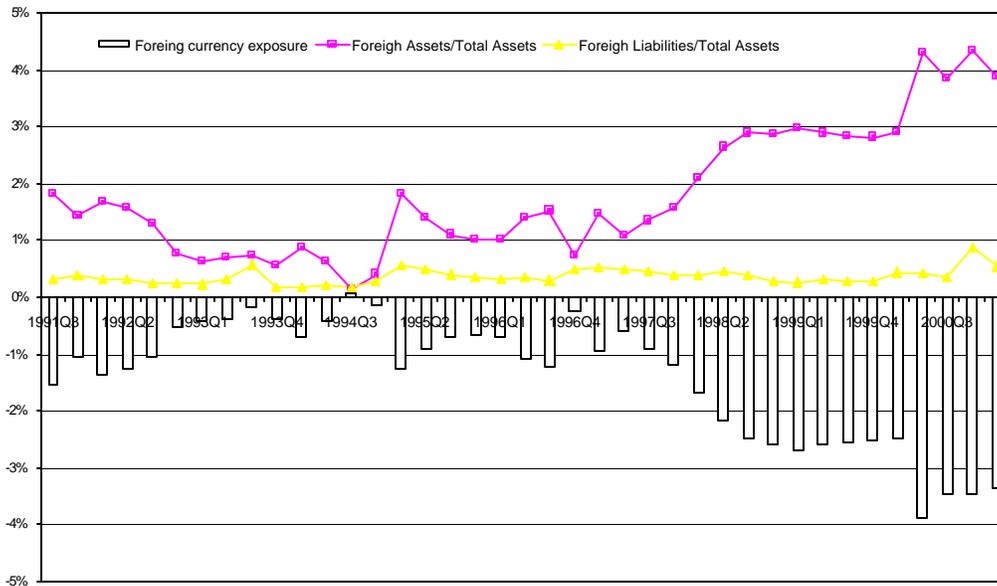


CHART 7e: Mexico—Past Due Loans

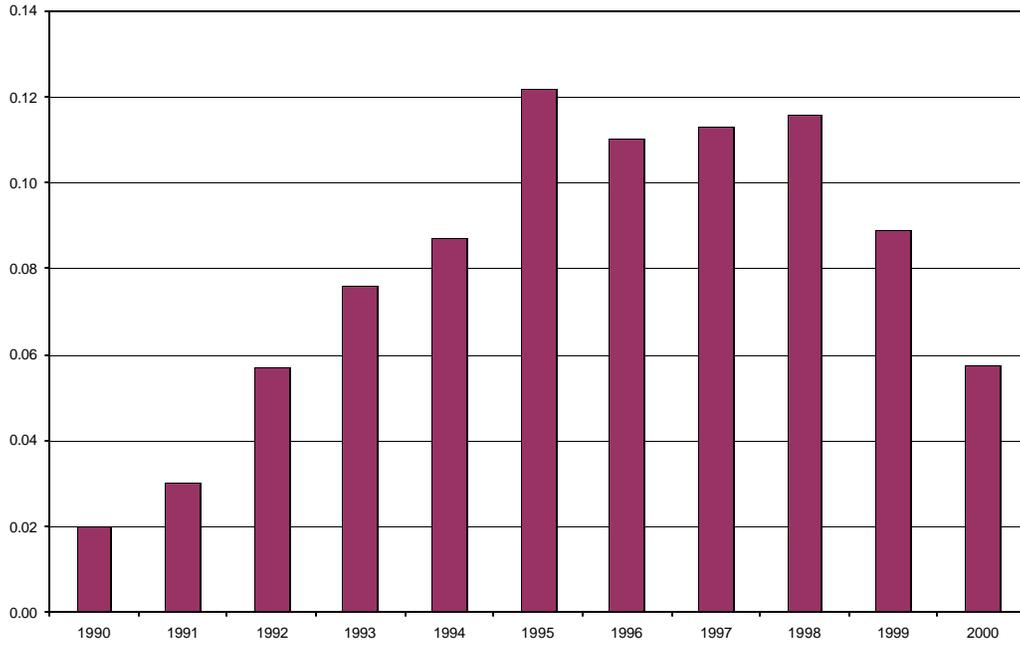


CHART 7f: Mexico—GDP Growth Rate

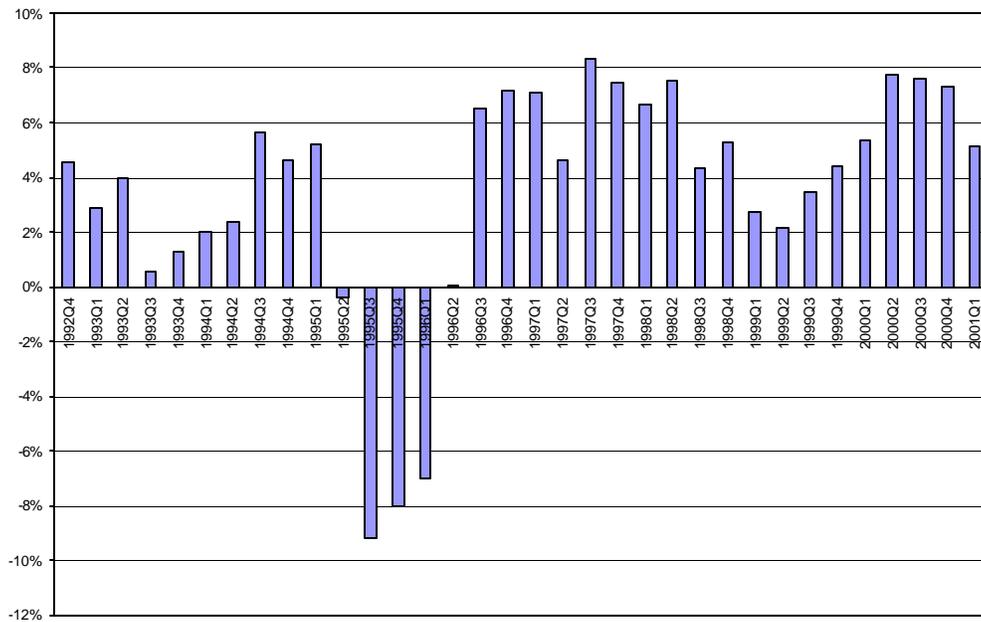


CHART 8a: Chile—Total Lending and Lending to the Private Sector

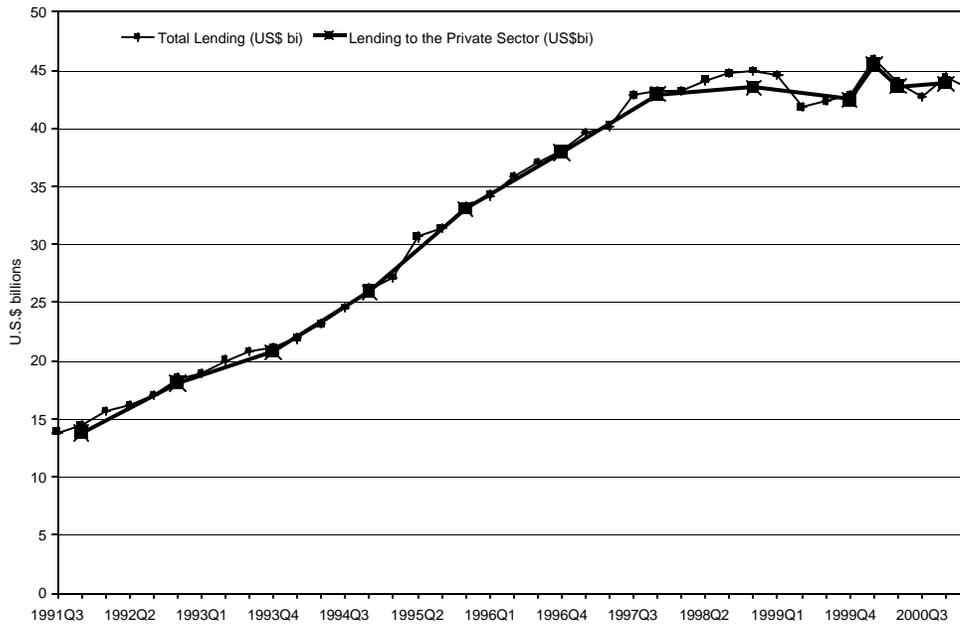


CHART 8b: Chile—Total Lending and Lending to the Private Sector

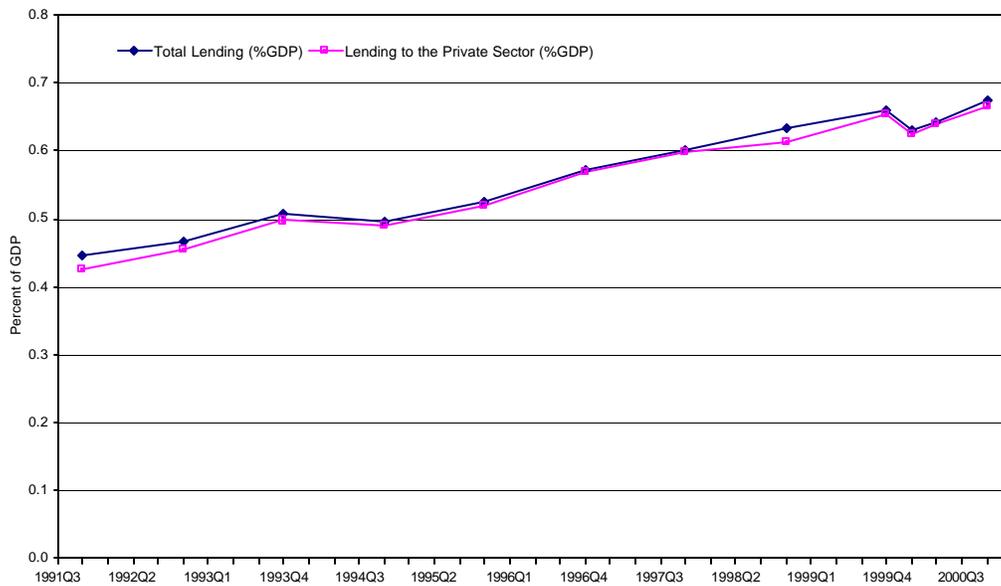


CHART 8c: Chile—Interest Rates and Spreads

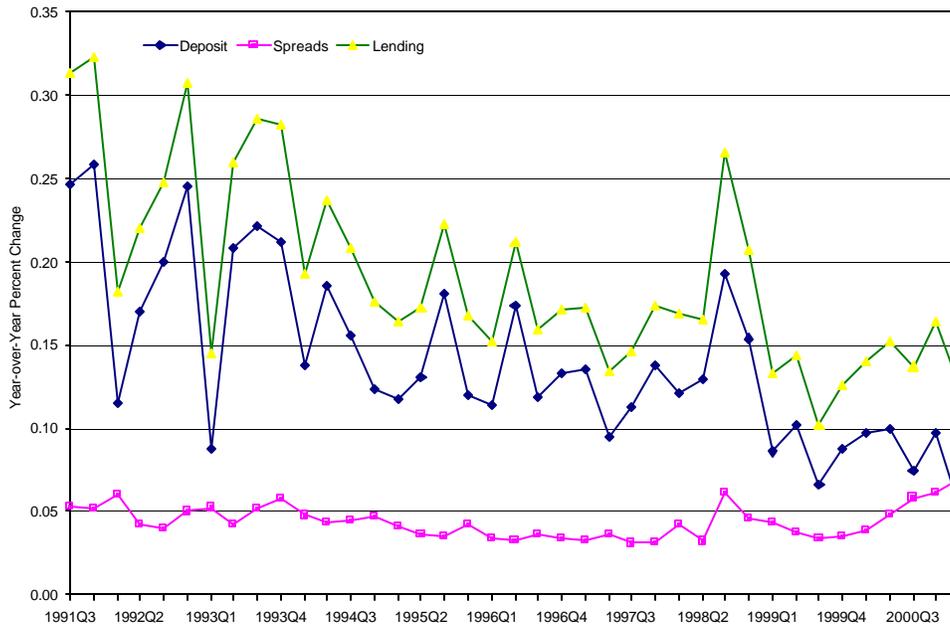


CHART 8d: Chile—Foreign Exchange Exposure

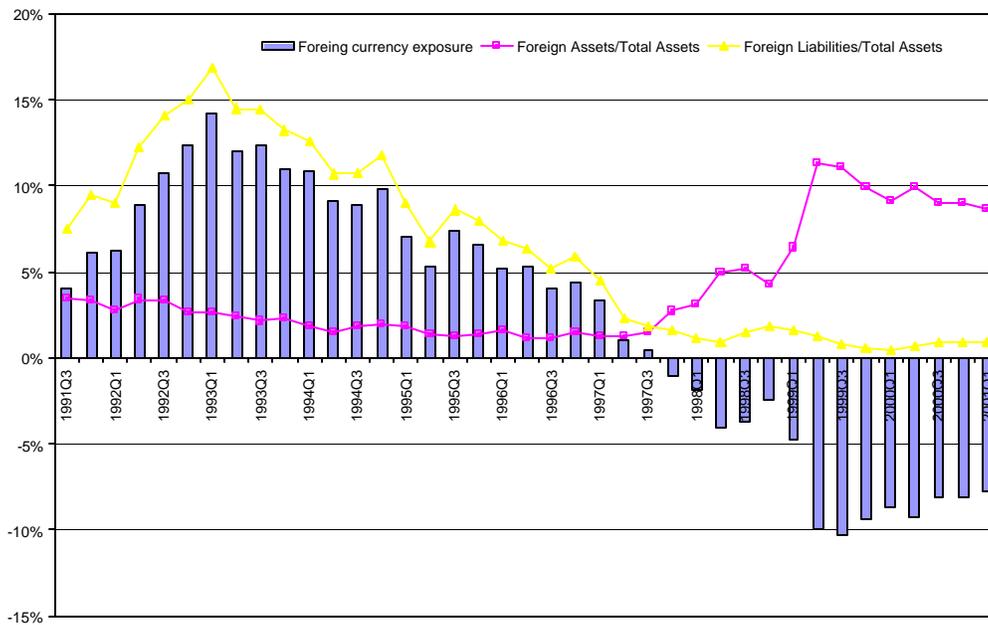


CHART 8e: Chile—Past Due Loans/Total Lending



CHART 8f: Chile—GDP Growth

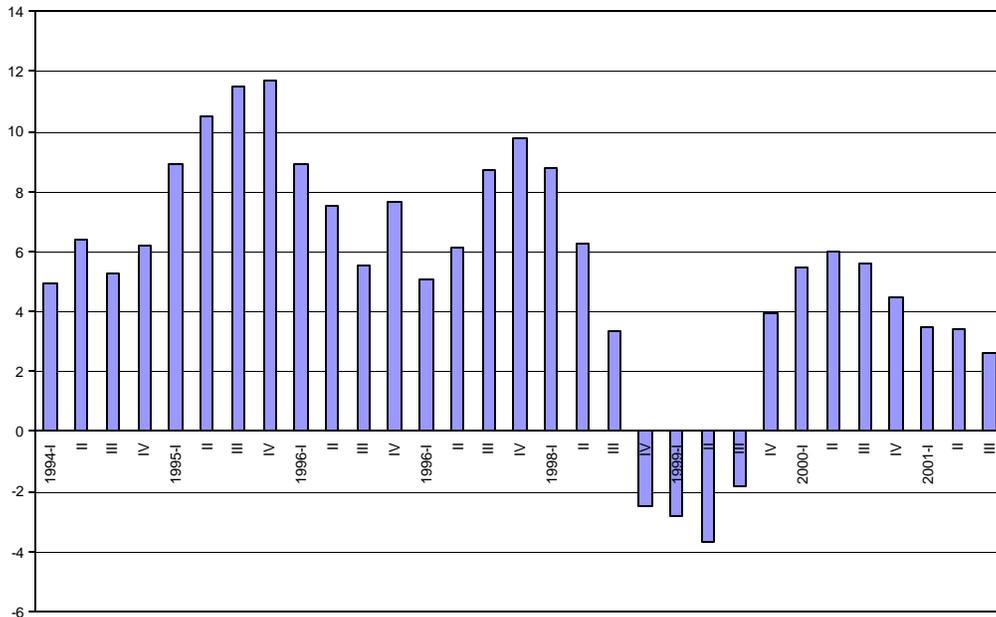


TABLE 1: Foreign Bank Assets as a Share of Total Bank Assets (Percent)

Country	1994	1999	2000
Czech Republic	5.8	49.3	66
Hungary	19.8	56.6	62
Poland	2.1	52.8	70
Turkey	2.7	1.7	N/A
Argentina	17.9	48.6	49
Brazil	8.4	16.8	23
Chile	16.3	53.6	54
Colombia	6.2	17.8	26
Mexico	1.0	18.8	24
Peru	6.7	33.4	40
Venezuela	0.3	41.9	42
Korea	0.8	4.3	3
Malaysia	6.8	11.5	18
Thailand	0.5	5.6	12

Source: 1994 and 1999 (IMF 2000, 153); 2000 (BIS 2001a, 25).

TABLE 2: Local Currency Positions of BIS Reporting Banks' Foreign Affiliates with Local Residents (U.S.\$ million and Percent of Latin America)

	Claims			Liabilities			Net local assets (MNCB credit-MNB deposits)		
	U.S.\$ million		LA/	U.S.\$ million		LA	U.S.\$ million		LA
	LA	DE	DE%	LA	DE	DE%	LA	DE	DE%
1985	9,773	31,087	31.4	7,441	22,450	33.1	2,332	8,637	27.0
1990	15,312	49,637	30.8	13,010	37,775	34.4	2,302	11,862	19.4
1994	30,357	101,438	29.9	22,553	73,855	30.5	7,804	27,583	28.3
1995	44,276	122,661	36.1	33,627	90,248	37.3	10,649	32,413	32.9
1996	64,089	157,364	40.7	47,844	113,141	42.3	16,245	44,223	36.7
1997	123,040	234,623	52.4	98,510	187,441	52.6	24,530	47,182	52.0
1998	134,148	242,407	55.3	102,271	192,579	53.1	31,877	49,828	64.0
1999	141,327	269,977	52.3	122,820	224,271	54.8	18,507	45,706	40.5
2000	210,316	381,438	55.1	182,880	313,686	58.3	27,436	67,752	40.5
2001	231,401	440,911	52.5	194,323	392,020	49.6	37,078	48,891	75.8

Note: LA is Latin America; DE is total developing economies. Observations for 2001 are for the first quarter.

Source: BIS Consolidated International Claims, several issues;

**TABLE 3: Argentina, Brazil, Chile, and Mexico:
Some Indicators of Concentration in the Banking Sector**

	1994				2000			
	Number of Banks (1994)	Share in Total Deposits		HH Index (1994) ^a	Number of Banks (1994)	Share in Total Deposits		HH Index (2000) ^a
		Largest 3 Banks	Largest 10 Banks			Largest 3 Banks	Largest 10 Banks	
Argentina	206	39.1	73.1	756.9	113	39.8	80.7	865.7
Brazil	245	49.9	78.8	1,220.9	193	55.2	85.6	1,278.6
Chile	37	39.5	79.1	830.4	29	39.5	82.0	857.9
Mexico	36	48.3	80.8	1,005.4	23	56.3	94.5	1,360.5

^a The HH index is a standard measure of consolidation in any industry and it is defined as the sum of the squared deposit market shares of all the banks in the market. By construction, the HH index has an upper value of 10,000 in the case of a monopolist firm with a 100 percent share of the market; the index tends to zero in the case of a large number of firms with very small market shares. An increase in the HH index thus indicates a rise in overall concentration of the banking sector.

Source: IMF (2001,11).

TABLE 4: Outstanding Amounts of Debt Securities Issued In Domestic Markets

	1989	1993	1997	2000	1989	1993	1997	2000
	U.S.\$ billion				Percent of total			
Latin America	172.1	296.7	490.6	482.8	1.2	1.4	1.9	1.6
Argentina	113.5	39.0	70.1	85.2	0.8	0.2	0.3	0.3
Brazil	—	189.9	344.5	292.5	—	0.9	1.4	1.0
Chile	7.5	19.2	36.5	34.2	0.1	0.1	0.1	0.1
Mexico	51.1	47.9	37.6	67.3	0.4	0.2	0.1	0.2
All issuers	14,042	20,565	25,464	29,733	100.0	100.0	100.0	100.0
OECD	13,559	19,967	24,452	28,580	96.6	97.1	96.0	96.1

Source: BIS database (www.bis.org), consolidated and elaborated by the author.

TABLE 5: Bank Regulation—Some Selected Indicators

Criteria	Argentina	Brazil	Chile	Mexico	USA
Minimum capital-asset ratio requirement (%)	11.5	11.0	8.0	8.0	8.0
Actual risk-adjusted capital ratio (%)	16.4	15.8	12.3	13.0	12.0
Overall capital stringency	6.0	3.0	3.0	4.0	4.0
Capital regulation index	8.0	6.0	5.0	7.0	6.0
Overall bank activities and ownership restrictiveness	1.8	2.5	2.8	3.0	3.0

Source: Elaborated by the author based on data from Barth, Caprio, and Levine (2001a); the definitions of the indexes are found in the appendix of that paper.

TABLE 6: Bank Supervision—Some Selected Indicators

Criteria	Argentina	Brazil	Chile	Mexico	USA
Professional bank supervisors per institution	2.4	4.0	3.0	11.5	0.1
Official supervisory power	12.0	15.0	13.0	10.0	14.0
Prompt corrective action	—	6.0	3.0	3.0	5.0
Restructuring power	3.0	3.0	3.0	3.0	3.0
Declaring insolvent power	3.0	3.0	3.0	3.0	3.0
Supervisory forbearance discretion	3.0	2.0	1.0	2.0	2.0
Supervisor tenure	6.2	15.0		N/A	7.0
Likelihood supervisor moves into banking	3.0	2.0	3.0	1.0	1.0
Percentage of top ten banks rated by international credit-rating agencies	100.0	100.0	50.0	N/A	100.0
Private monitoring index	8.0	8.0	8.0	6.0	8.0

Source: Elaborated by the author based on data from Barth, Caprio, and Levine (2001a); the definitions of the indexes are found in the appendix of that paper.