CHAPTER 4

The Condition of Mexican Banking

Between 1977 and 1982, as the country's leading banks grew internationally, the Mexican banking sector significantly increased its weight in the national economy after half a decade of financial disintermediation. Yet the recovery experienced by the banking industry came along with important changes in its balance sheet structure and financial condition. On the one hand, current accounts and saving deposits persistently diminished their share as source of funding, while the maturity structure of medium- and long-term domestic fundraising instruments was considerably shortened. On the other hand, the expansion experienced by banking activity was largely reliant on heightened recourse to indebtedness rather than equity. There were no substantial improvements in reserve levels either and, as a result, the commercial banking sector became twice more leveraged over the period.

This chapter analyzes the roots of the deteriorating health of the Mexican banking sector in connection with the international expansion of leading commercial banks in the late 1970s and early 1980s. It addresses the question of how involvement with foreign finance and the banks' fundraising strategy affected their financial position. A financial statement analysis is performed with risk indicators reconstructed from bank balance sheets, as published in the Multibank Bulletin of the Financial Analysis Unit of the National Banking and Insurance Commission (CNBS). The analysis also draws on data from annual reports and a compendium of historical financial statistics

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from Banco de Mexico, as well as additional information from the Financial Yearbook of Mexico (*Anuario Financiero de México*) published by the Mexican Banker Association and the Financial and Stock Market Yearbook (*Anuario Financiero y Bursátil*) of the Mexican Stock Exchange.

In the literature on Mexican banks during the period preceding the debt crisis and their nationalization in 1982, the banking sector has been traditionally portrayed as operating under normal returns and low risks.[1] The analysis that follows raises doubts about such interpretation and shows that there were clear signs of a deterioration in the health and financial position of the Mexican banking system well before the onset of the crisis, with the banks engaged in international lending and foreign funding being the ones with the greatest propensity to be the most adversely affected by these problems. The group of the six Mexican banks involved with international finance displayed worse capital adequacy levels and a more instable funding base than the banks that were operating only at a national level. While the most prominent banks of the country could leverage on foreign resources to expand their activities, the entire domestic banking system became riskier and more vulnerable.

A Weakening Funding Structure

Deposits, defined in its wider sense as the amount of money placed in the banking system by the public, have traditionally been the most important source of funding for commercial banks. In 1977, the total liabilities or funding base of the Mexican commercial banking system reached US$20.3 billion. Of this amount, local deposits from the private and public sector accounted for 91.3%, while 4.9% were transactions between domestic financial institutions—Banco de Mexico, development banks and other commercial banks, 3.1% were loans from foreign banks and

[1] Gustavo del Angel, 'Paradoxes of Financial Development: The Construction of the Mexican Banking System, 1941–1982', Unpublished PhD diss., Stanford University, 2002, 18–62; 'La banca mexicana antes de 1982' in Gustavo del Angel, Carlos Bazdresch and Francisco Suárez Dávila (Eds.), *Cuando el estado se hizo banquero: consecuencias de la nacionalización bancaria en México* (Mexico City, 2005), 43–56; Stephen Haber and Aldo Musacchio, *Los buenos tiempos son estos: los efectos de la incursión de la banca extranjera en México después de un siglo de crisis bancarias* (Mexico City, 2014).

the remaining 0.7% was made up by other domestic liabilities.[2] Deposits from the public included the usual checking and saving accounts along with term deposits and a large variety of other saving financial instruments such as financial bonds, certificate of deposits, mortgage securities among others. At that time, as Agustin Legorreta acknowledged, "private banks in Mexico had the monopoly of the country's saving, since there were not [in Mexico], unlike in the United States, Treasury bills and the [bond] issues by the Mexican state and official institutions represented a small proportion of national saving."[3]

With the arrival of Romero Kolbeck at Banco de Mexico in end-1976, as the previous chapter discussed, a financial policy package was introduced with the express purpose of increasing the funding base of the banking system. The rationale behind the measures implemented was to increase both the yield of financial instruments and the variety of investment possibilities available in the domestic market to savers as to capture increasing volumes of funds. Financial authorities looked above all to stimulate and attract long-term savings by setting the rates paid to depositors of all kinds for deposits longer than one year (except for those of more than two years) at levels that allow for protecting savers from the effects of inflation. The rate was freed, and the banks could offer the return they wanted below the ceiling established by Banco de Mexico. The central bank also set the interest rate for deposits of less than one year denominated in foreign currency, but in this case following the evolution of the rates prevailing in London and New York. The policy was to fix the domestic rate one or two points above the international ones so that funds will be invested in Mexico rather than abroad.

In 1978, after the implementation of these new financial policies and the initial recovery of domestic fundraising, the deposit structure of the Mexican banking system looked as follows. Liquid deposits, which consisted of sight deposits or checking accounts and a variety of saving deposits with short term (maturities of one month or less) in national and foreign currency, accounted for half of the deposit base of the banks in approximately equal shares. The remaining half were not liquid liabilities and consisted of term deposits with maturities ranging between three

[2] Banco de Mexico, 1977 Annual Report, Table 18, 94–96.

[3] Banamex archive, Libro No. 11 de Actas de la Comisión Ejecutiva, September 21, 1977 Meeting.

months and two years. Term deposits denominated in pesos have been the most dynamic fundraising instruments during the year, with a particular strong increase recorded in the liabilities with one year of maturity or more as reported in the Banco de Mexico's 1978 Annual report.[4] In terms of its internal composition, third and sixth month's deposits accounted for about 12 and 17% of total time deposits, respectively, while deposits with maturity of up to one year were the most important components with a share of 52% and those with a maturity over a year were in the second place with a 19% share.

But this funding structure changed, and significantly deteriorated, over the following years. First, between 1977 and 1982, liquid saving instruments from the non-financial sector with the domestic banking system persistently reduced their share as source of funding. Figure 4.1 displays the evolution of checking account deposits and short-term time deposits in terms of the total liabilities of the Mexican banking system. The chart shows that the contraction in liquid funding instruments is almost entirely explained by the decline of checking account deposits, which dropped from representing 22% of bank funding in 1977 to 11.5% in 1982. As for the short-term deposits, their share remained quite stable at around 17–18% of total liabilities during the whole period. Within a highly inflationary context, the cost of holding liquidity in checking accounts or sight deposits that pay no interest was important, and it seems therefore logic that depositors may have reduced such holdings and looked to place their savings in financial instruments that provided a return that allowed for minimizing the loss of currency value due to inflation or had prefered to increase consumption instead.

A second change relates to the increasing role of foreign finance as a source of funding that developed within the Mexican banking system. As explained in the previous chapter, the external fundraising instruments consisted essentially of credit lines from foreign banks operating in the Eurocurrency or US money markets and were mainly conducted through the network of foreign agencies and branches of leading Mexican banks. Figure 4.1 shows that the increasing participation of external funding in the liability structure of the banking system compensated the falling share of current account and sight deposits. This means a substitution between domestic and international liquidity, but such a change was not

[4] Banco de Mexico, 1978 Annual Report, 65–68.

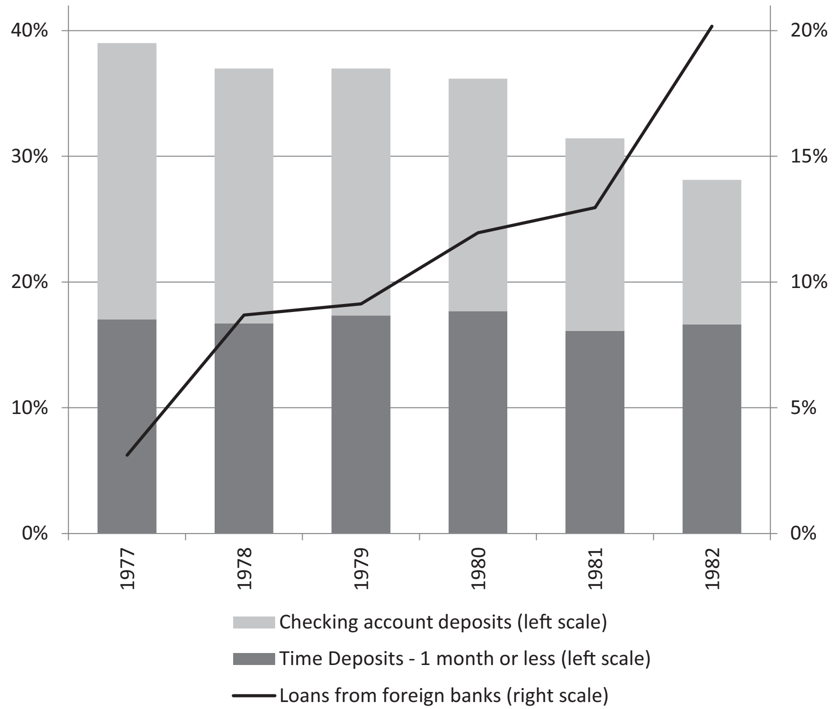

Fig. 4.1 Liquid funding structure of the Mexican banking system, 1977–1982 (% of total liabilities) (*Source* Banco de Mexico, Annual Reports [several issues])

a positive one for the domestic banking system. While current accounts were the least expensive non-equity source of funding for commercial banks and were mostly denominated in national currency, the credit lines from foreign banks were in dollars and paid interest rates. Wholesale interbank credit lines were also more volatile and much less stable than the deposits from the domestic non-banking sector, and therefore introduced a new element of vulnerability in the system.

Finally, although stable in terms of the volume of funding, the internal composition of long-term liabilities also suffered important transformations over the period. Figure 4.2 shows the evolution of the maturity structure of long-term deposits in terms of the total liabilities of the commercial banking system between 1978 and 1982. While time deposits of one year and over were the most important fundraising

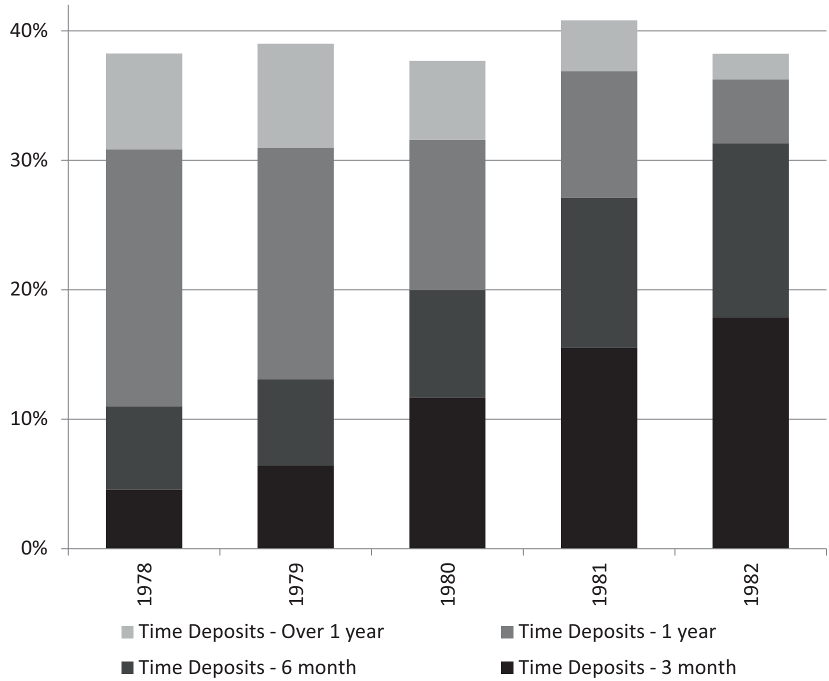

Fig. 4.2 Long-term deposits structure of the Mexican banking system, 1978–1982 (% of total liabilities) (*Source* Banco de Mexico, Annual Reports [several issues])

instruments and accounted for about 70% of total illiquid liabilities in December 1978, they represented 26% by end-1981 and around 18% in 1982. Conversely, time deposits with maturity of less than one year accounted for 30% in 1978 but as much as 82% by 1982. Within this category, shorter term accounts, namely three-month deposits, were the more dynamic components, increasing their share from 12 to 47% over the period. The shortening in the maturity structure of term deposits signified also a weakening in the liability side of the banking system balance sheet, since a funding base with a high concentration on long-term deposits is naturally more stable than one that is dominated by short-term placements.

The transformation of the maturity structure of term deposits and its concentration on three-month deposits was the result of the yield

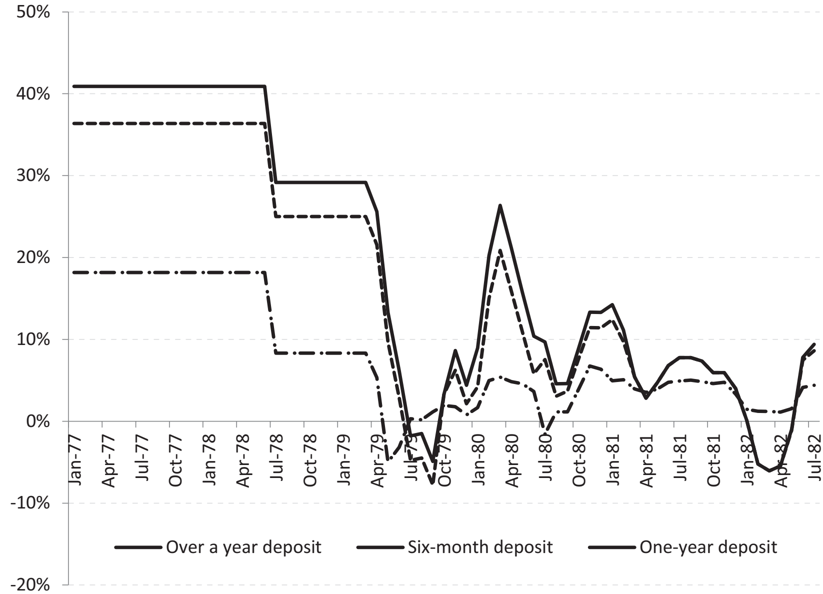

Fig. 4.3 Yield of long-term saving instruments relative to the three-month deposit rate (*Note* Computed as the spread between the interest rate of long-term and three-month deposits as a share of the three-month deposit rate. *Source* Banco de Mexico, *Series Financieras Históricas* [Mexico City, 1994])

structure of the different term instruments. Figure 4.3 plots the evolution of the spreads between the interest rates of term deposits at different maturities with respect to the three-month deposit in percentage terms. In 1977, the yield of deposits at over one year was 40% higher than that of three-month deposits, and those of up to one year and six months were 36 and 18%, respectively. The chart shows a considerable reduction in spreads in mid-1978 and a steep decline since the first quarter of 1979. Moreover, between April and October 1979 spreads became negative in some cases, meaning that the yield of three-month deposits was actually higher than that of deposits with longer maturities. Spreads become more volatile from then on and exhibit indeed a downward trend toward the end of the period. Thus, the concentration of three-month deposits seems to have been the outcome of a yield structure in which nominal rates of saving instruments at different maturities were not so different and even tended to converge. It seems logic that, in the context of rising inflation and diminishing spreads between long- and short-term deposits, investors or savers had preferred financial instrument with shorter maturity.

As a result of these changes, by 1982 the funding base of the Mexican banking system was much bigger than in 1977, but it was structurally less solid and more instable. On the one hand, low-cost liquid deposits in pesos diminished its share as source of funding while recourse to relatively more expensive foreign liquidity in dollars increased. These were the years where banks around the world started to use liability management strategies, which led to increasing reliance on short-maturity debt borrowed from other banks to fund the expansion of its assets.[5] On the other hand, the interest rate policy followed by the central bank resulted in a concentration of term deposits with short maturities, implying a weakened and less stable funding base. In the end, this new liability structure of the banking system made it more vulnerable to shifts in the international capital market and or negative external shocks that may affect the placement decisions of domestic depositors or foreign banks.

Impoverished Capital and Greater Risks

Along with the changes in the funding base, the Mexican banking system suffered from a more general deterioration of its balance sheet structure. Notably, the capital base of the banking industry experienced progressive impoverishment throughout the period. Figure 4.4 shows the evolution of the leverage level, calculated as the ratio of paid-in capital and reserves to total assets, between 1977 and 1982. It passed from about 4% in the first quarter of 1977 to around 2.5% in mid-1981 and 1.6% after the devaluation of February 1982. In other words, the assets of the banks expanded 3.1 times faster than their capital and reserves. To the extent that banks' capital base serves as a cushion for unexpected losses and keep defenses strong in case of major shocks, these changes meant that the Mexican banking system became more vulnerable to a rise in defaults on its loans or a market downturn on the prices of the assets

[5] See, for instance, Stefano Battilossi, 'Financial Innovation and the Golden Ages of International Banking: 1890–31 and 1958–81', *Financial History Review* 7 (2000), 141–75.

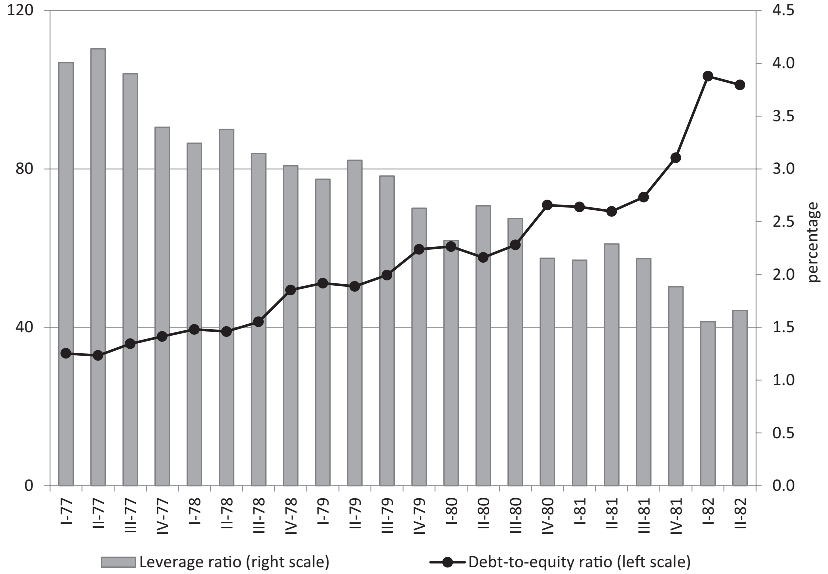

Fig. 4.4 Risk indicators for the Mexican banking system, 1977–1982 (*Note* Debt-to-equity ratio = liability/equity; leverage ratio = (equity + reserves)/assets. *Source* Banco de Mexico's, Annual Reports [several issues])

they held. On the contrary, an expansion of the balance sheet financed with more capital would have determined a better position to bear losses.

Figure 4.4 also displays the debt-to-equity ratio, measured by dividing the total liabilities of the banking system by its level of paid-in capital. The ratio reveals the financial obligations of the sector as a percentage of its total market value, indicating the amount of debt it has been used to finance the development of its activities. The ratio passed from 33.4 in the early 1977 to around 60 in 1980, and to 82.8 by end-1981; that is a 2.5 increase in the 5-year period of exchange rate stability. However, given the growing share of dollar external liabilities, the ratio reached much higher values after the devaluation of the peso in February 1982. This also shows the extent to which the banking industry had dramatically increased its reliance on debt to finance the expansion of the assets in the aftermath of the disintermediation years. Moreover, not only was the banking sector taking on more debt rather than equity to increase its businesses, but it was not proportionally improving its reserves levels either as the deterioration of the leverage ratio indicates.

The case of Intermex, Banamex's consortium bank, provides an interesting comparative benchmark. The headquarter of this bank was in London, and their activities were therefore subject to UK banking regulation and the supervision of the Bank of England. Archival records from Banamex contain the discussions held among the members of the Executive Committee regarding the evolution of the business activity of the bank in relation to its capital base and the requirements of the Bank of England. At the end of 1974, the year of its creation, Intermex had a capital base of £2.5 million and liabilities that represented 10 times its capital. By 1975, the liabilities had increased up to 19 times the level of paid-in capital, which pushed shareholder banks to increase its capital to £5 million, diminishing the debt-to-equity ratio to 14.[6] In 1977, Intermex's liabilities had climbed to around £130 billion "giving a debt to equity ratio of 26 to 1, which was outside the policy of the Bank of England, who consider[ed] a ratio of 20 to 1 between debts and capital manageable."[7] With these figures in the background, the numbers exhibited by the Mexican banking system look quite worrisome: Debt to equity was already 50% higher than the level the Bank of England considered prudent by early 1977.

In Mexico, the capacity of the banks to expand its liabilities and take debt was determined according to the amount of capital and total reserves of the institution. The banking law did not set a ratio or limit, which was supervised by the SHCP, but established the different types of liabilities to be considered in the computation. The reforms introduced to the Mexican banking law during the first half of the 1970s affected the capacity of banks to leverage on debt in an ambiguous way. On the one hand, the new legislation permitted banks to exclude funding used to finance liquid and risk-free assets from the computation of the capacity of the banks to expand its liabilities, allowing for increasing leverage at a consolidated level. On the other hand, in an attempt to avoid a highly leverage financial system,

[6] Banamex archive, Libro No. 8 de Actas de la Comisión Ejecutiva, February 8, 1976 Meeting.

[7] Banamex archive, Libro No. 10 de Actas de la Comisión Ejecutiva, January 5, 1977 Meeting.

the law looked also to control from capital pyramids effects through which different financial institutions from an economic group used a same unit of equity when computing their indebtedness capacity.[8] These were years where financial regulation did not still require banks to control risks and hold adequate equity through capital requirements as it would be the case during the 1980s, with the worldwide expansion of prudential regulation that followed the Basel Accord.[9]

Naturally, lending was the banking sector's main activity and a main component of its balance sheet, with a loan portfolio representing between 50 and 55% of the assets during those years. In terms of its currency composition, the loan portfolio was mainly denominated in national currency, although dollar lending gained importance and persistently increased its share toward the end of the period. While in 1977, dollar lending accounted for about 20% of total lending—the balance consisted of credits denominated in pesos, by the beginning of 1982, however, its weight has increased to 30% and to 42% after the devaluation of February. Figure 4.5 represents the evolution of the ratio of loans in pesos and dollar to capital for the Mexican banking sector between 1977 and 1982. The chart shows that peso loans remained quite stable relative to capital, oscillating between 13.8 and 17.2 during the period. The private sector was the main destination of these credits, accounting for as much as 92.5% of the total lending in pesos on average, while the public sector and other financial institutions represented 5.3 and 2.2%, respectively.

On the other hand, lending in dollars considerably expanded in terms of the capital base of the banking system. As shown in Fig. 4.5, the dollar loan portfolio to banks' capital doubled between 1977 and end-1981, jumping to much higher levels after the 1982 February devaluation. By end-1981, as in the case of loans in local currency, the Mexican private sector was the main recipient of dollar credit lines, accounting for 52.7% of banks' dollar loan portfolio. The Federal government and public dependencies represented 23.2%, financial institutions 4.8% and

[8] Mariana M. de Sousa, 'The Embedded-Agency Approach to Bank Regulation: The Case of Latin America', *Documento de trabajo CIDE* No. 210 (2011).

[9] Eugenio Rivera and Adolfo Rodríguez, 'Competencia y regulación en la banca de Centroamérica y México. Un Estudio Comparativo', *CEPAL—Serie Estudios y Perspectivas* No. 71 (2007).

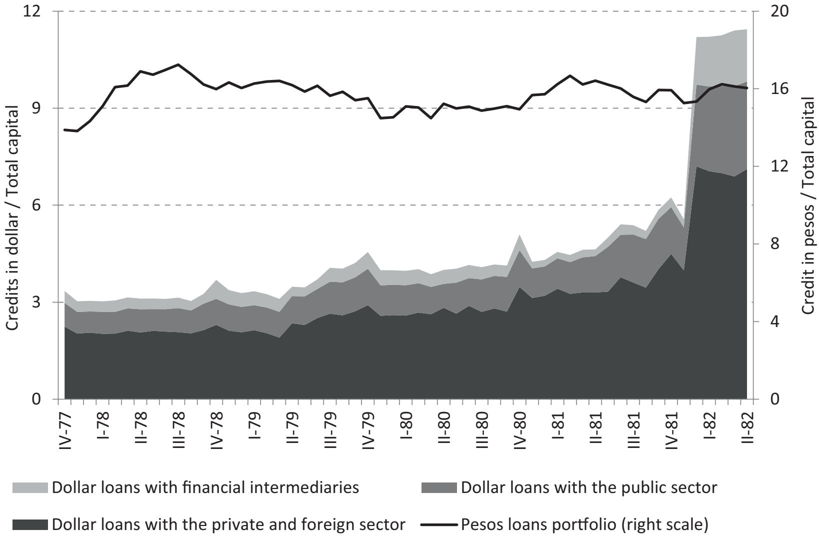

Fig. 4.5 Evolution of the loan portfolio of Mexican banks relative to capital, 1977–1982 (*Source* Banco de Mexico, *Series Financieras Históricas*)

remaining 19.3% were loans to the external sector since, as part of their international operations, Mexican banks were also lending to other Latin American countries and non-Mexican borrowers. These figures give a clear idea of the extent that the higher leverage of the banking industry related to the internationalization of the system and the increasing involvement with dollar rather than pesos lending operations.

The banking industry came indeed to increasingly leverage on external indebtedness to fund its assets, namely loans, during this period. While only 3% of the assets of the domestic banking system were funded by borrowing from foreign banks in 1977, the proportion increased to 11.6% in 1980 and about 20% in 1982. On the other hand, the share of banking assets funded by domestic sight and term deposits in local and foreign currency oscillated around an average of three quarters. The rise of foreign borrowing and lending without proportional increases in the reserves or capital base affected the safety and soundness of the banking system. Because during downturns, bank with a highly leveraged balance sheet usually suffer from loss of confidence much earlier than less-leveraged institutions, an increase in the leverage ratio indicates therefore that the financial system becomes more vulnerable to episodes of market panic and external shock that could provoke insolvencies.[10]

International Roots in Banking Fragility

It should be clear by now that during the upswing of Mexican banking since 1977, the system at large became more fragile and vulnerable to shocks or changes on market conditions both in Mexico and abroad. On the one hand, the deposit base significantly shortened and foreign borrowing increased its share as source of funding. On the other hand, the sector was increasingly undercapitalized and the balance sheet more and more dollarized. The internationalization of Mexican banking and the integration of the domestic financial system in the world capital markets were at the center of this process since it had a direct impact on the capacity of the banking industry to leverage on foreign liquidity and expand its lending activities. However, not all Mexican banks were operating at an international level, and it is not evident the extent to which international finance contributed to the increasing fragility of the banking system or if there were other factors at the base of these problems.

This section looks more deeply into the role of international finance in the deteriorating health of the Mexican banking system. It does so by assessing whether higher risk in the banking industry was a homogenous phenomenon or not, and the extent to which it affected some banks or group of banks more than others. In this regard, the distinction is made between banks involved with international finance ("internationally oriented banks") and those operating only in the domestic market ("domestic oriented banks"). Had international financial intermediation been a significant source of additional vulnerability, the group of internationally oriented banks would be expected to exhibit higher levels of risks than domestic-oriented banks. Conversely, if no major differences are observed in the evolution of leverage or capitalization levels, then foreign borrowing and international lending may not have been the origin,

[10] See, for instance, Nicola Gennaioli, Andrei Shleifer, and Robert Vishny, 'Neglected Risks, Financial Innovation, and Financial Fragility', *Journal of Financial Economics* 104 (2012), 452–68.

or at least not the most important cause, of the increasing weakness that the Mexican banking system experienced during the last quarter of the 1970s and the early 1980s.

A financial statement analysis is performed at the bank level with financial ratios reconstructed from the balance sheets of the banks as published by Mexican banking authorities. In December 1978, the Financial Analysis Unit of the CNBS started to publish the "*Boletín mensual de indicadores y estados financieros de las instituciones de crédito*," which contains the balance sheets of multiple banks in Mexico on the monthly base.[11] The period covered in this analysis begins in the second quarter of 1979, the sixth month after the first Bulletin was issued, up to the second quarter of 1982, before the announcement of the Mexican government's debt moratorium and the later nationalization of the banking system. The first two quarters are discarded because at that time an important number of financial institutions were still in the process of merging and becoming multiple banks, and therefore, the bulletins do not include data on their balance sheet. In the end, the analysis includes 23 multiple banks for which there is complete and consistent balance sheet information for the entire period.[12]

By the beginning of 1982, the Mexican commercial banking system reached US$80.3 billion in total assets and liabilities. There were 35 multiple banks that accounted for 93.3% of this amount as represented in Fig. 4.6, while the remaining 6.7% belong to 12 deposit banks, six *financieras*, five capitalization companies and a Mortgage bank that have not evolved into multiple banks and kept their previous legal standing.[13] The 23 multiple banks of the sample represent as much as US$71.9 billion or 95.8% of all multiple banks. The group of internationally oriented banks includes the six larger banks of the country—Bancomer, Banamex, Banca Serfin, Multibanco Comermex, Banco Internacional and Banco Mexicano Somex, which were involved with foreign finance in the terms

[11] Since 1980 the bulletin was published under the name of "*Boletín de indicadores financieros de la banca múltiple privada y mixta*."

[12] Including the last quarter of 1978 and the first of 1979 would have required a considerable reduction of the sample in order to have a complete time series of the banks.

[13] CIEN-A19/E-89/Marzo de 1983, "*La banca antes de la nacionalización*".

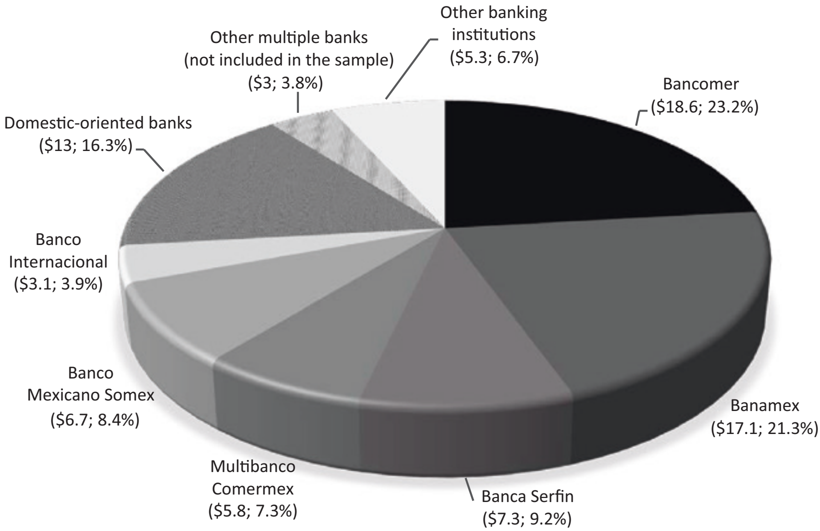

Fig. 4.6 International and domestic-oriented institutions in the Mexican banking market (total assets in December 1981 in US$ billion and %) (*Source* CNBS, Boletín de indicadores financieros de la banca múltiple privada y mixta [December 1980] and Banco de Mexico's 1981, Annual Report)

discussed in previous chapters.[14] Together they represent 81.8% of the sample and about 73.2% of the entire commercial banking system. On the other hand, the group of domestic-oriented banks was made up of 16 of the 23 banks in the sample but held only 18.2% of the assets and liabilities, with Banco del Atlántico, Banpais, Banco BCH and Bancreser among the biggest players.[15]

[14] For the purpose of the analysis, Banca Promex is also considered as internationally oriented bank since it was part of the banking group Mexicano-Somex.

[15] The other domestic-oriented banks included in the sample are Banca Cremi, Multibanco Mercantil de México, Banca Confia, Crédito Mexicano, Banco Regional del Norte, Actibanco Guadalajara, Unibanco, Banco Continental, Banco Mercantil de Monterrey, Banco del Noroeste, Banco Sofimex, Banco Occidental de Mexico.

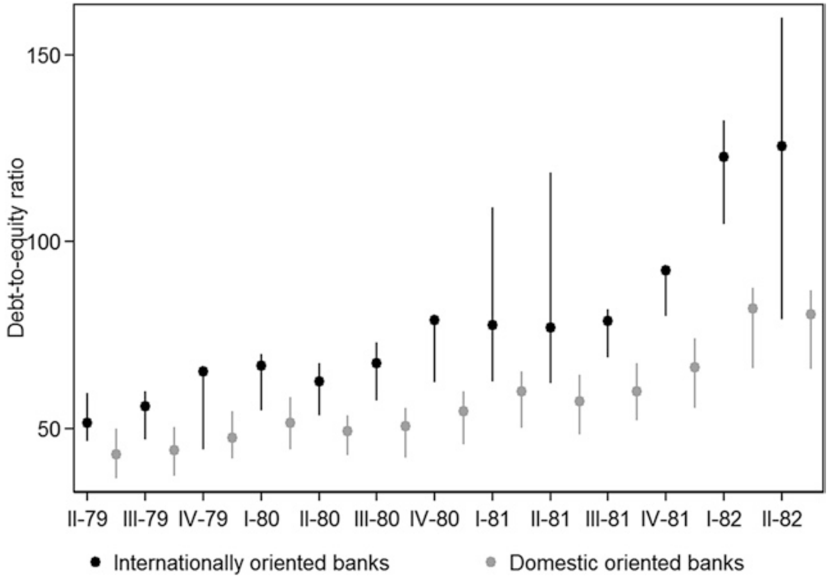

Fig. 4.7 Debt-to-equity ratio of international vs. domestic-oriented banks, 1979–1982 (*Note* Debt-to-equity ratio=liabilities/total equity. *Source* CNBS Multibank Bulletin [several issues])

Figure 4.7 shows the evolution of the debt-to-equity ratio for the group of internationally and domestic-oriented banks. The chart plots the mean weighted by the size of the banks (measured by total liabilities) and the 50% central distribution per quarter for each group between 1979 and 1982. The value of the ratios for internationally oriented banks stands persistently above the levels observed for domestic-oriented bank, with the gap between them growing toward the end of the period. The interpretation of this is that the former had been much more aggressive than the latter in financing their expansion with debt instead of shareholders' equity, and that they became significantly more leveraged during the years preceding the outbreak of the debt crisis. While access to the international capital markets gave to Mexican leading banks the possibility of finding additional sources of funding to further expand their businesses, domestic-oriented banks could only rely on local resources that were much more limited and expensive. Thus, although the balance sheets of both groups of banks became increasingly leveraged

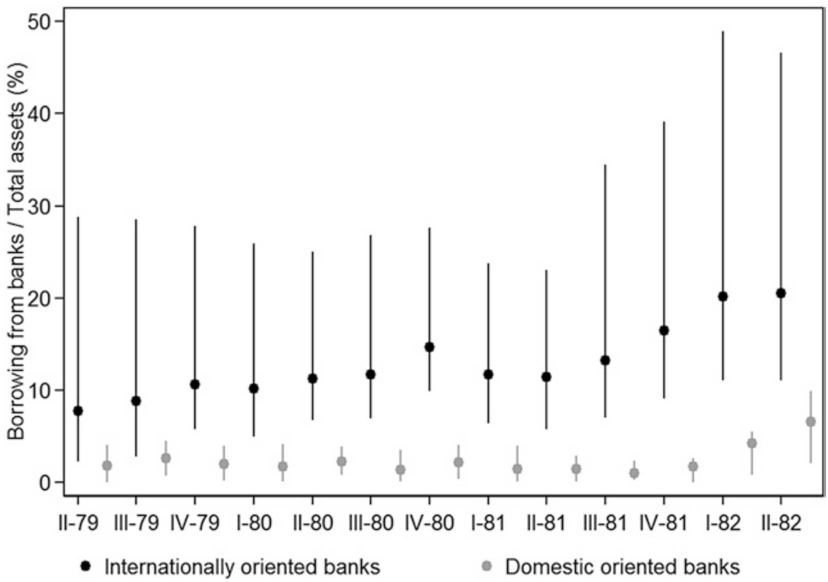

Fig. 4.8 Borrowing from banks to total assets of international vs. domestic-oriented banks, 1979–1982 (*Source* CNBS Multibank Bulletin [several issues])

throughout the period, those with access to foreign funding, which were the most systematically important banks, display considerably more worrisome levels.

In a similar vein, Fig. 4.8 plots the mean and 50% central distribution of the fraction of assets funded by interbank loans for the group of internationally versus domestic-oriented banks. The chart shows considerable differences between the two groups of banks, with the former displaying higher levels than the latter. These results reflect the fact that banks operating abroad could raise foreign liquidity by borrowing from foreign banks, while interbank funding for banks operating only in the national market was restraint to the Mexican money markets, which provided much-limited funding possibilities than its massive US and London counterparts. Interbank credit lines were unsecured, they were more volatile than deposits from the public, and thereby the higher volumes of interbank borrowing in relation to assets are an important indicator of reckless banking practice and risky behavior. Moreover, unlike money market transactions within Mexico, foreign interbank credit lines entailed an additional source of vulnerability related to fluctuations in the foreign exchange and international interest rates. Not only were internationally oriented banks twice more leveraged than domestic-oriented banks, but their liabilities, namely the interbank funding lines, were also riskier.

This comparative analysis of the financial ratios shows that the group of internationally oriented banks demonstrated higher levels of risks than banks that operated only at a national level, and that international finance was at the center of these problems. By increasingly relying on funding lines from foreign banks, Mexico's leading banks expanded its assets without improving its reserves and capital levels, becoming more leveraged and exposed to external shocks or shifts on international market conditions. The risks behind the involvement with foreign indebtedness become more evident after the devaluation of February 1982. The debt-to-equity ratio and interbank funding to assets considerably increased for both groups of banks, but the deterioration of the ratios is much worse for internationally oriented banks given their larger engagement with dollar liabilities and exposure to currency risk. Thus, in terms of liability management, the financial statement analysis at the bank level shows that higher risk in the domestic banking sector was not a homogenous phenomenon and that it affected more to banks involved in foreign finance than those operating only in the domestic market.

Liquidity Position and Funding Base

Along with its role in the impoverishment of capitalization levels, international finance had also a negative repercussion on the liquidity position of Mexico's leading banks. Figure 4.9 plots the evolution of the quick ratio for the group of internationally and domestic-oriented banks between 1979 and 1982. The ratio is calculated as the coefficient between banks' current assets, namely cash, deposits with Banco de Mexico and government and private securities, and their current liabilities, which include sight deposits and loans from other banks. The figure shows higher levels of risk for the group of international banks, since lower levels of the ratio indicate a more limited ability to meet their short-term obligations with liquid assets, and thus a worse short-term liquidity position. In comparative terms, the liquidity position of internationally oriented banks was about 50% weaker than that of domestic-oriented banks. From 1981 onwards, it appears that domestic-oriented

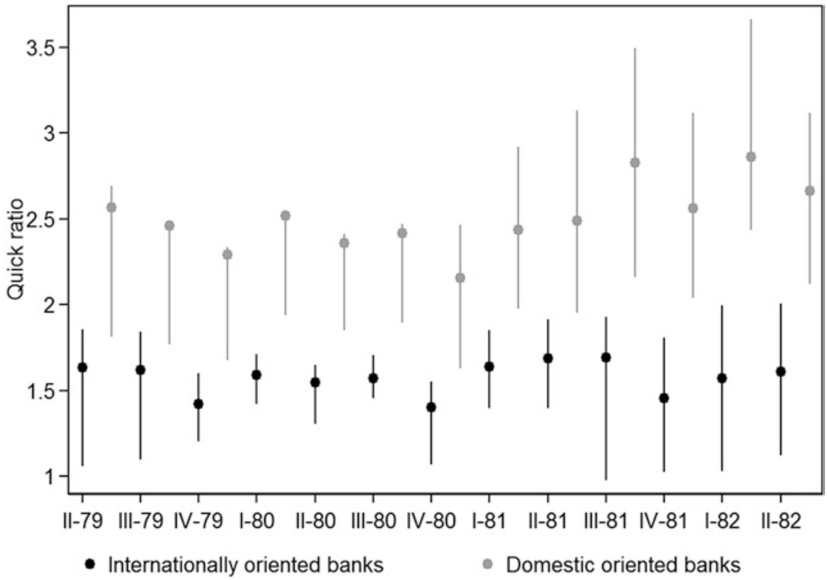

Fig. 4.9 Quick ratio of international vs. domestic-oriented banks, 1979–1982 (*Note* Quick ratio = current assets/current liabilities. *Source* CNBS Multibank Bulletin [several issues])

banks came actually to improve their ability to meet their financial obligations with liquid assets.

What explains the weaker liquidity position of internationally oriented banks is the combination of less liquid assets and a funding base more focused on short-term fundraising instruments. Previous research has elaborated condensed indicators of risk for Mexican banks during these years derived from a large number of balance sheets ratios widely used in finance to conduct financial statement and banking analysis.[16] In this work, the bank's asset liquidity indicator shows that, after a period of no major differences, there was a considerable improvement in the liquidity of the asset portfolio for the group of domestic-oriented banks and a relative worsening for banks involved in international finance from mid-1981 on.

[16] Sebastian Alvarez, 'Venturing Abroad: The Internationalisation of Mexican Banks Prior to the 1982 Crisis', *Journal of Latin American Studies* 49 (2017), 517–48, esp. 545–48.

In addition, the maturity composition indicator of the banks' funding base, which is related to the ratios of bank loans and time and sight deposits to total liabilities, also displays important discrepancies between the two groups. The funding structure of internationally oriented banks had a larger concentration in short-term financing than banks operating only at a national level all over the period.

The higher reliance on short-term funding observed for the group of internationally oriented banks is not explained by the modifications observed on the retail deposit base. Figure 4.10 shows the changes in the share of different fundraising instruments on total liabilities for Banamex, Bancomer and Banca Serfin, the three largest Mexican international banks, between 1978 and 1981. The chart shows a clear reduction in the contribution of sight and saving deposits and other liquid financial instruments such as *pagarés* (promissory notes) or its predecessors.[17] In the case of Banamex, for instance, sight and saving

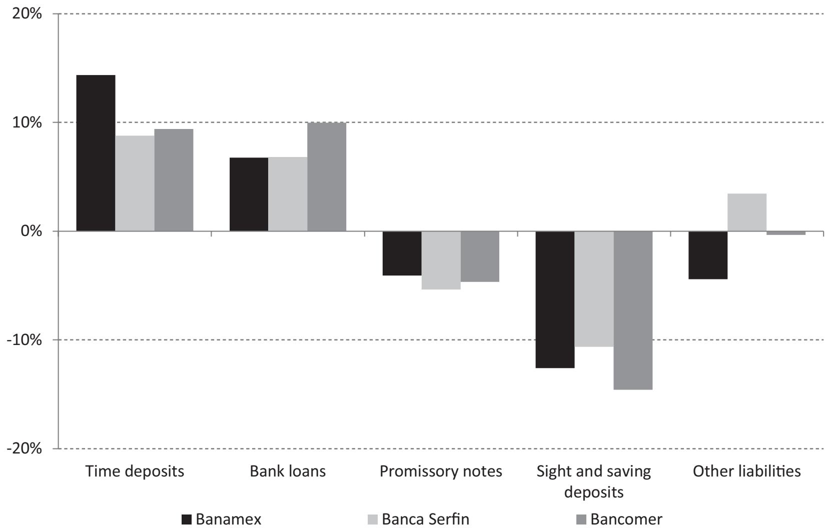

Fig. 4.10 Change in the share of funding instruments to total liabilities, 1978–1981 (*Source* CNBS Multibank Bulletin [several issues])

[17] Up to 1977, banks could raise funds through mortgage and financial bonds or certificates, but these instruments were progressively taken out of circulation and replaced by promissory notes from firms and the public.

deposits passed from accounting 38.9% of its funding base in 1978 to 26.3% by end-1981, that is a fall of 12.6 percentage points. As for the promissory notes, the drop was of 4.1 percentage points, which added to sight and saving deposits represents an accumulated fall of 16.7 percentage points in liquid fundraising instruments with the domestic private and public sector.

On the other hand, time deposits and bank loans increased their participation as source of funding, compensating for the declining share of domestic liquidity. For Banamex, time deposits, which had maturities of three months up to over a year, incremented their share on total liabilities by 14.4 percentage points between 1978 and 1981. However, this shift in the composition of retail funding does not explain the larger concentration on short-term funding of Mexican international banks because the term deposits had longer maturities than the instrument they were outweighing. It is the increasing reliance on wholesale interbank funding what accounts for such outcome. In fact, short-term bank loans increased from 2.7% of total liabilities in 1978 to 9.5% in 1981 for Banamex and from 4.9 to 14.9% and 2 to 8.8% for Bancomer and Banca Serfin, respectively. The behavior of other liabilities, which was essentially made up of *reportos* or repurchase agreements, shows no clear trend and appears more erratic across banks and along time.

Figure 4.11 plots the relationship between the change in the contribution of sight deposits and bank borrowing to the funding base for the sample of 23 Mexican multiple banks between 1978 and 1981. The chart makes clear that along with Banamex, Bancomer and Serfin, the other three Mexican international banks, Multibanco Comermex, Banco Internacional and Banco Mexicano-Somex, experienced a reduction in the share of sight deposits to total liabilities in this period. For these banks, recourse to interbank loans as source of funding also increased. In fact, internationally oriented banks appear as a separate, distinct group in the lower right corner of the chart, with changes in the shares of both fundraising instruments above average variations.[18] This shift from liquid retail deposits to wholesale interbank liquidity implied higher risk given the more volatile and instable nature of money market transactions, particularly so when it involved cross-border transactions and currency risk.

[18] Recall that Banca Promex belonged to the banking group Mexicano-Somex.

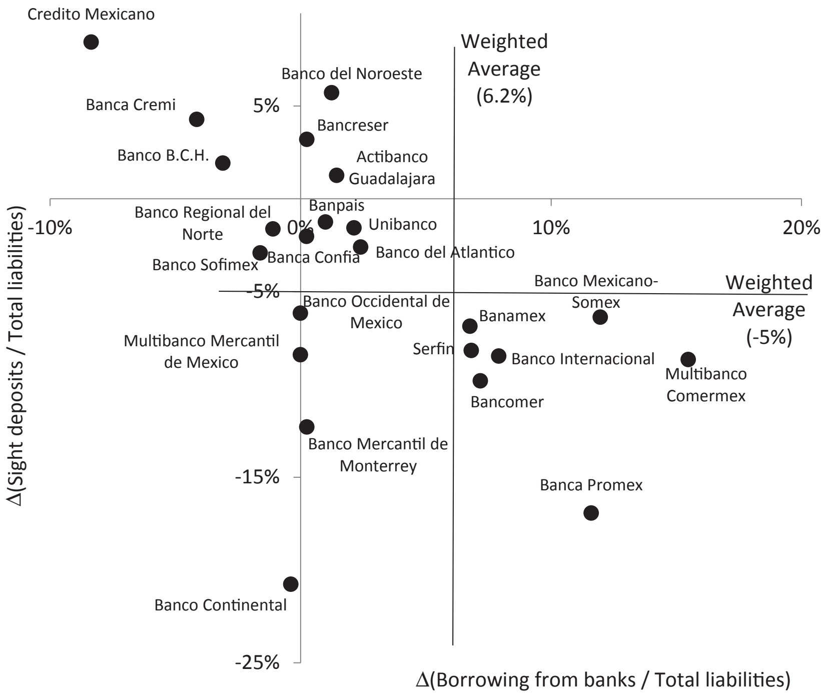

Fig. 4.11 Change in the share of deposits and bank borrowings to total liabilities, 1978–1981 (*Note* Calculations for Banco Mexicano-Somex, Banco Internacional and Banco del Noroeste relate to 1979 and 1981. *Source* CNBS Multibank Bulletin [several issues])

On the contrary, the other banks experiencing significant declines in the share of sight deposits to total liabilities do not display higher levels of bank borrowing. Figure 4.11 shows that Banco Occidental de Mexico, Multibanco Mercantil de Mexico, Banco Mercantil de Monterrey and Banco Continental had virtually no variation in the share of bank borrowing as source of funding. As in the case of Banamex, Bancomer and Serfin, their balance sheets exhibit offsetting changes on time deposits accounts but the size of the change was much larger. The new composition of retail deposits did not imply a less stable and riskier funding base as in the case of internationally oriented banks since time deposits had much longer term. As for the rest of the domestic-oriented banks, changes were much less dramatic, and no pattern seems to appear between retail and wholesale liquidity, with some of them actually incrementing their share of sight deposits as source of funding during this period.

The change of the funding structure operated within internationally oriented banks reveals a substitution between domestic retail liquidity and international wholesale liquidity. This behavior explains the decline in the share on total liabilities of checking account deposits and the offsetting increase of borrowing from foreign banks observed at the level of the banking industry as described at the beginning of this chapter and represented in Fig. 4.1. Since the group of international banks accounted for about three-fourths of the domestic banking system, they drive the behavior observed in the aggregate data. Declining sight deposits were replaced by larger interbank foreign borrowing that entailed higher risk levels not just for the group of international banks, but for the entire domestic banking system.

With strong economic growth and an increasing domestic saving rate in Mexico, the fall of liquidity in real terms and as a share of the total bank liabilities is counter-intuitive.[19] Either because economic agents were deviating liquidity and savings somewhere else and/or the banks deliberately reducing recourse to them, it begs the question of where all this money was going. This is an important concern in connection with the wave of capital flights affecting the country during those years, which was believed to be intermediated through the banking system. As explained in Chapter 3, high domestic interest rates combined with an overvaluation of the local currency and free foreign exchange convertibility generated a movement of savings toward term deposits and the flow of liquidity abroad to capitalize the gains. With the leading banks of the country increasingly integrated abroad, it is possible that the money these banks were losing in their deposit accounts was being transferred abroad, but this is an issue that requires further investigation.

[19] Domestic private savings relative to Mexican GDP passed from 13.5% in 1977–1978 to 14.6% in 1980 and 18.4% by the beginning of 1982.

Loan Portfolio and Devaluation

Unlike with liabilities, the increasing reliance on debt, and particularly foreign indebtedness, to finance the expansion of banking activities did not bring major changes in the performance of the asset side of the balance sheets. In 1977, credits to the government and private financial and non-financial sector accounted for about half of the claims of the Mexican banking system and oscillated around that level over the years leading to the 1982 debt crisis. Cash and balances with depository institutions were the other major accounts, representing between 38 and 43% of total banking assets, of which about nine-tenths were the legal reserve requirement held in Banco de Mexico. Taken together, they represented over 90% of the assets of the banking system, while investment in public bonds and private securities was usually below 5% and the remainder were other types of resources.

Figure 4.12 shows the evolution of the share of the loan portfolio on assets for the group of internationally and domestic-oriented banks. After a period of similar trends and levels between 1979 and 1980, the ratios began to diverge in 1981. While the share of loans to assets for the group of banks operating only at a domestic level falls, it increases for Mexico's international banks and starts to decrease in the first quarter of 1982 without reaching the low levels of its domestic-oriented counterparts. In the early 1980s, financial authorities increased the legal reserve requirements, and the funds that were previously available for lending had to be deposited in the central bank.[20] In terms of total assets, government securities and deposits in Banco de Mexico grew from 36.5 to 48.6% between mid-1979 and mid-1982 for domestic-oriented banks, while the loan portfolio dropped from 49.7 to 38.6% over the same period. Unlike them, internationally oriented banks had access to foreign funding that was not subject to reserve requirement, and this could be used to maintain their lending portfolio, which only started to decline after the currency crisis of early 1982.

[20] The legal reserve requirement raised from 37.5% in December 1979 to 40.9% by June 1980.

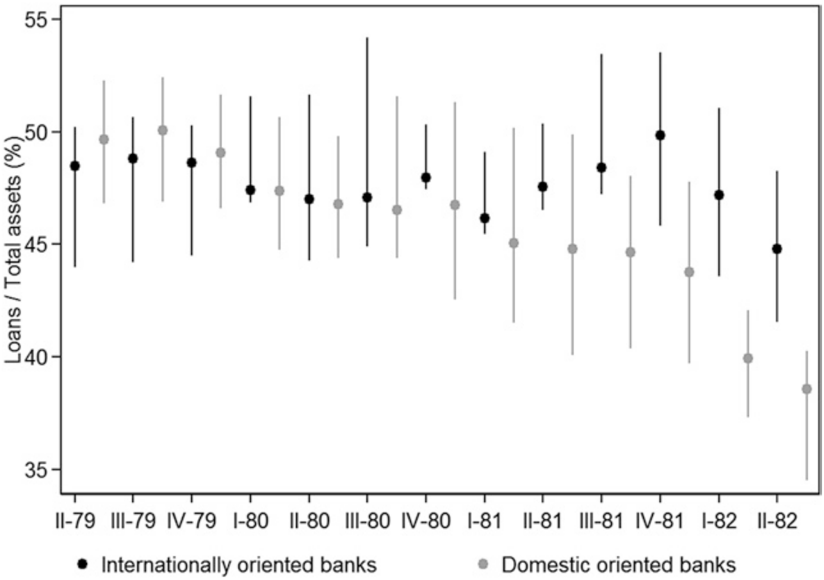

Fig. 4.12 Loan portfolio to total assets of international vs. domestic-oriented banks, 1979–1982 (*Source* CNBS Multibank Bulletin [several issues])

The involvement with foreign finance did not necessarily imply a deterioration in the asset side of bank's balance sheet. Figure 4.13 plots the ratio of non-performing loans to total loans for the six Mexican banks operating abroad and the group of domestic-oriented banks from March 1979, the first quarter for which information on non-performing loans is available, until June 1982. At the aggregate level, the share stands at around 3% in average over most of the period, slightly increasing to 3.8% by June 1982. The group of internationally oriented banks, which were engaged in dollar lending and external businesses, do not display particularly worrisome values, and the portion of non-performing loans was indeed lower than the sector average. Notably, the group of domestic-oriented banks experienced a deterioration, with the ratio increasing from an average of 3.2% during 1981 to 4.5% in March 1982 and 5.4% by June 1982. As described in the previous chapter, the economic

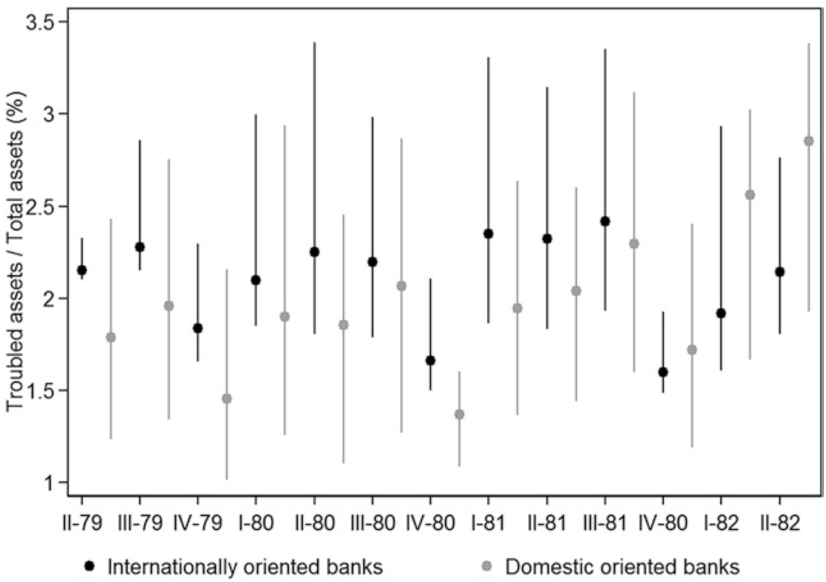

Fig. 4.13 Troubled loans to total loans of international vs. domestic-oriented banks, 1979–1982 (*Source* CNBS Multibank Bulletin [several issues])

crisis that followed the devaluation of February 1982 created some serious debt repayment problems among private sector borrowers and this affected the banking sector as a whole.

Archival evidence from Banamex shows that the Executive Committee was closely monitoring the evolution of the non-performing loan portfolio in the aftermath of the devaluation. As of June 1982, Banamex's General Director Agustin Legorreta reported to the Committee that the past-due portfolio has so far performed within the forecast. He notified that the ratio of non-performing loans to the loan portfolio for the banking system had been 3.43% in 1981 and 3.41% for Banamex, and that as of April 1982 the correspondent values had increased to 3.92 and 3.66%, respectively. He also explained that, given the abnormal situation the country was going through, it has been decided to increase bank's reserves above what has been originally planned, and that he did not expect potential losses to affect the projected outcomes for 1982. However, as a precautionary measure and in anticipation of possible difficult cases, the bank had contacted law firms for debt collection management and created a special unit in charge of dealing with non-performing loans.[21]

The situation of the Alfa Industrial Group was given special consideration by Banamex. As of June 1982, according to the records of the bank's management team, the company's total liabilities reached US$2369 million, of which US$1669 million or 70% was owed to a total of 23 Mexican banks and 80 foreign creditor banks. The claims of Banamex with Alfa stood at around US$762 million, an amount representing 0.69% of the total debt of the group and 5.6% of outstanding loans with Mexican banks. As much as 90% of the Alfa's indebtedness was denominated in dollars, which explains why the devaluation created serious debt payment problems for the group. According to Banamex official Juan Elek, between January and April 1982 the cash flow deficit of the Alfa Group reached 10 billion pesos (about US$266 million) and interest payments US$55 million per month. For Legorreta, the "real state of Alfa was bankruptcy" and the solution would require the liquidation of some firms and the takeover of others by the government and the private sector. Had this been confirmed, in the eyes of Juan Elek, the situation of Banamex would not be seriously compromised because its "credits [had been] granted to the best firms of the Group, such as Hylsa, Fitón, La Marina, Redes, Textiles Industriales, among others."[22] In the particular case of Hylsa, which was Mexico's largest steel company and the best performing sector of the group, its financial health and productivity based profits were widely recognized, and it was therefore difficult to believe it would go bankrupt.

Compañía Vinícola del Vergel of the Garza Sada Group provides another example of the rise in debt payment difficulties post-devaluation and the preoccupations of Mexican creditor banks. This firm, which according to Banamex's records started to confront some financial problems in 1981 due to some speculative operation with Brandy, was seriously affected by the currency crisis of early 1982. At that moment, the company had bank liabilities of US$70 million, which resulted in foreign exchange losses of 1260 million pesos, an amount representing 26.4%

[21] See Banamex archive, Libro No. 14 de Actas de la Comisión Ejecutiva, June 9, 1982 Meeting.

[22] Ibid.

of its assets as of end-1981. The devaluation and short-term structure of its debt had brought the firm into the brink of failure. Banamex had US$14.3 million of outstanding claims with Vergel, US$6 million of which were overdue and the remaining US$8.5 million were coming due in the next months. The situation concerned other creditor banks as well, such as Comermex, Banco Internacional, Serfin, Bancomer, Citibank and Chase Manhattan, with which Banamex was meeting in order to arrange financial assistance and avoid the liquidation of the firm. To protect the bank of whatever outcome may occur, Alejandro Legorreta informed the members of the Banamex's committee that "all kinds of legal actions [had been filed] in order to ensure its interests in the best possible way within the difficult situation."[23]

Although debt payment problems were looming in 1982, it does not seem that banks involved with foreign capital had financed more, or were more exposed to, risky loans than domestic-oriented banks. It was the devaluation rather than the increased leverage on foreign borrowing what deteriorated the quality and riskiness of bank's assets. To the extent that the quality of the asset portfolio of financial institutions depends on the financial health and profitability of its clients, the problems confronted by the non-financial sector in the aftermath of the devaluation came to affect the balance sheet of the banks. An indicator of asset quality elaborated in previous work, which is based on the ratios of troubled assets to total assets and return on assets, along with other balance sheet indicators, shows virtually no deterioration prior to the currency crisis of 1982.[24] Moreover, unlike in the case of capital adequacy, liquidity position and funding maturity, no major differences are observed in the quality of the assets, and the risks associated with them, of internationally and domestic-oriented banks. The devaluation seems to be the landmark behind the weakening of bank's asset quality in 1982, and it concerned all Mexican banks and not just those involved in foreign finance and international lending.

As part of larger economic conglomerates, it is possible that the focus of the banks was on extracting a premium from their existing relationships with other firms from the group rather than shifting to riskier

[23] Ibid.

[24] Alvarez, 'Venturing Abroad', 547.

assets. Although there is no information available on financial terms or the composition of the loan portfolio at the bank level, the importance of insider lending within Mexican financial institutions has been largely documented in the national historiography. For instance, Gustavo del Angel has argued that, in a context where rights of ownership were uncertain in Mexico, related lending served as a way of overcoming the problems of asymmetric information such as adverse selection, monitoring, repayment and the establishment of new contracts.[25] He finds that during the post-war period Mexican banks did not present significant exposure to credit risk as a result of this practice, and that only a few institutions experienced financial problems connected to lending opportunism. Notably, in the 40 years that preceded the debt crisis of 1982 the ratio of non-performing loans to total loans was relatively stable and the banks that suffered financial troubles were mostly small local banks and not the leading ones.

Banks in the Stock Exchange

Multiple banks were *sociedades anónimas,* or joint stock-limited liability corporations, and they were listed on the Mexican Stock Exchange. Their paid-in capital consisted of shares issued in the stock market and purchased by shareholders, which then became publicly tradeable although most banks maintained a locked corporate control on them.[26] In 1982, for instance, the capital stock (*capital social pagado*) of Banamex was 5375.7 million pesos according to the records of the Mexican Stock Exchange and was made up of 107,494,400 shares with a nominal value of 50 pesos.[27] This amount of paid-in share capital represented 26% of the total capital or equity of Banamex, with the remainder consisting of legal and voluntary reserves as well as non-distributed profits. By end-1982, a total of 26 multiple banks were listed in the Financial

[25] Del Angel, 'Paradoxes', 202–40. See also Jorge Basave Basave, Carlos Morera, and Carlos Strassburger, *Propiedad y control en los grupos financieros empresariales en México*, 1974–1988 (Mexico City, 1994) and Nora Hamilton, *México: los límites de la autonomía del Estado* (Mexico City, 1983).

[26] See Leonor Ludlow (Ed.), *200 Emprendedores mexicanos: la construcción de una nación* (Mexico City, 2010).

[27] Bolsa Mexicana de Valores, *Anuario financieo y bursatil 1982*, 520.

and Stock Market Yearbook—including the 23 multiple banks analyzed in this chapter—along with a number of other deposit banks, *financieras*, investment firms or trust funds, insurance companies and other specialized financial institutions.

Although registered in the stock exchange, the shares of the banks were not necessarily all highly traded. In fact, operations in the Mexican security markets have been historically dominated by government papers and commercial banks' financial bonds, while the trading of stocks, from either corporations or the banks themselves, had a much smaller role in the activity of the exchange. According to data collected by Gustavo del Angel, the volume of stock transactions never exceeded 10% of the value of securities traded in the market.[28] After 1978, with the creation of an open market for government bonds—the Mexican treasury bills called Cetes, these securities came to account for a large majority of Mexican stock market activity. Among banks, those with regular monthly stock transactions were the largest four, Bancomer, Banamex, Banca Serfin and Multibanco Comermex, and to a lesser extent Banca BCH, Banca Cremi and Banca Confia, while the other banks had operations on a much more irregular basis and only during some months of the year.

Figure 4.14 plots the evolution of the Mexican Stock Exchange index along with the shares of Bancomer, Banamex and Serfin between 1977 and 1982. It shows the stock market boom experienced by Mexico in this period, with the average price per share increasing from 353 pesos in November 1977 to a peak of 1614 pesos by May 1979, an average growth rate of 8.8% per month. The enactment of the *Ley del Mercado de Valores* (Security Market Law) in 1975, which entailed the fusion of regional stock exchanges and their consolidation into a national entity called Bolsa Mexicana de Valores, set the institutional framework to reorganize and develop the market. The subsequent administration of Lopez Portillo, as María Elena Cardero and José Manuel Quijano explain, adopted a series of new measures, namely tax incentives and a legal requirement on banks to invest part of their saving resources in securities, with the intention to promote stock market activity.[29] The expansion of the market, which

[28] Del Angel, 'Paradoxes', 124–39.

[29] María E. Cardero and José M. Quijano, 'Expansión y estrangulamiento financiero: 1978–1981', in José M. Quijano (Ed.), *La banca: pasado y presente* (Mexico City, 1983), 221–304.

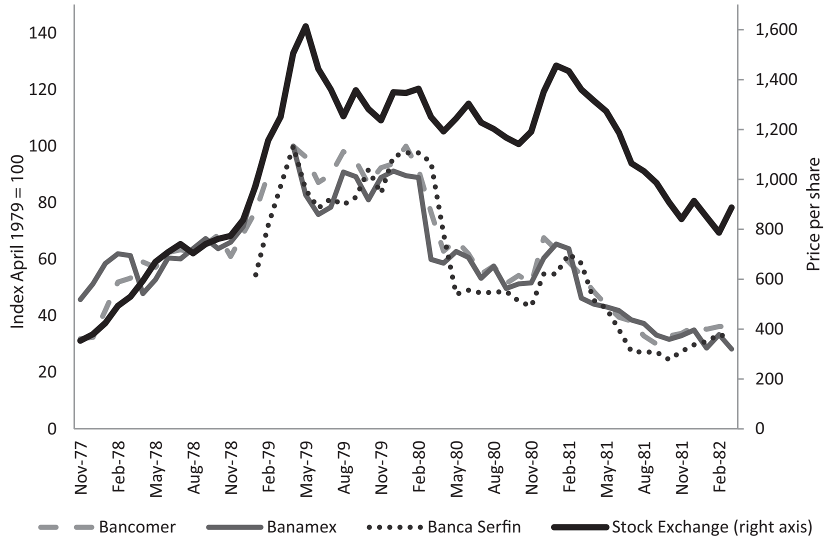

Fig. 4.14 Monthly share prices for international banks and Mexican Stock Exchange, 1977–1982 (*Source* Bolsa Mexicana de Valores, Anuario Financiero y Bursátil [several issues])

reflected speculative buying and selling of securities rather than primary stock issues, came to a halt by mid-1979, stagnated for the next two years and began to fall in early 1981.

During the late 1970s and early 1980s, the share prices of Banamex, Bancomer and Serfin coincided with the general trend observed in the stock market. They expanded at dizzying rates between November 1977 and May 1979, stagnating thereafter. However, as observed in Fig. 4.14, in the spring of 1980, one year prior to the bust of the stock market and well before the debt payment problems of 1982, the share prices of these three large Mexican banks collapsed. By June 1980, and in just six months, their stock prices had plummeted to almost half their January values, with Serfin exhibiting the most dramatic fall. From there on, banks' share prices continued a downward trend along similar lines that the Mexican Stock Exchange index until August 1982 when they reached the lower levels of the period. With the nationalization of the banking system of September 1, 1982, the Mexican state took the stocks out of the market, and their prices were thereby no longer listed.

The performance of share prices of Mexico's three largest banks, and of internationally oriented banks more generally, shows important differences with respect to those of other banking institutions. In the case of Banca BCH, for instance, stock prices quoted at 20–22 pesos per share in 1979, they dropped to 13.3 pesos in April 1970 and maintained around that value until January 1981, when prices climbed up again to oscillate between 20 and 30 pesos during the next period until August 1982. For Banca Cremi and Banca Confia, the other two banks for which a relatively complete series of monthly prices exist, the trend is a progressive and continuous decline all throughout the period. In May 1979, these banks quoted at 26.3 and 274 pesos per share, respectively, but they lost about half and a third of their value one year later and about 70 and 30% by the beginning of 1982. During 1982, Banca Cremi's share prices oscillated around 7.6 pesos on average until their exclusion from the stock market with the nationalization, as in the case of Banca Confia with an average price of 117 pesos.

Figure 4.15 plots the weighed mean and 50% inclusion ranges for the market-to-book values for the group of internationally and domestic-oriented banks between 1978 and 1982. Book value is the amount of paid-in capital and the market value is calculated as the product between the number of outstanding shares and the lower price reached by the shares during the year as reported in the 1982 Annual Yearbook of the Mexican Stock Exchange. The chart shows both types of banks as distinct groups, with international banks increasing the market-to-book value ratios during the stock exchange boom, declining then from an average of 3.5 in 1979 to about the unity in 1982. Some of them, such as Multibanco Comermex and specially Banca Serfin, reached situations where the market values of stocks were significantly lower than the book value, namely a ratio less than unity. On the contrary, the ratio for domestic-oriented banks was more stable, with average values of the market-to-book ratio between 1.6 and 2.1, and no fall toward the end of the period. It would seem, therefore, that the higher risks of internationally oriented banks were also represented in the stock market prices.

Noteworthy, Manuel Espinosa Yglesias, President and major shareholder of Bancomer, tried to sell the bank around this time. By the beginning of 1982, when Bancomer stock prices were at 35% of their January 1980 value, José Carral, the representative of Bank of America in Mexico, was approached by Banamex officials with a letter by Espinosa Yglesias to Bank of America's President Tom Clausen offering

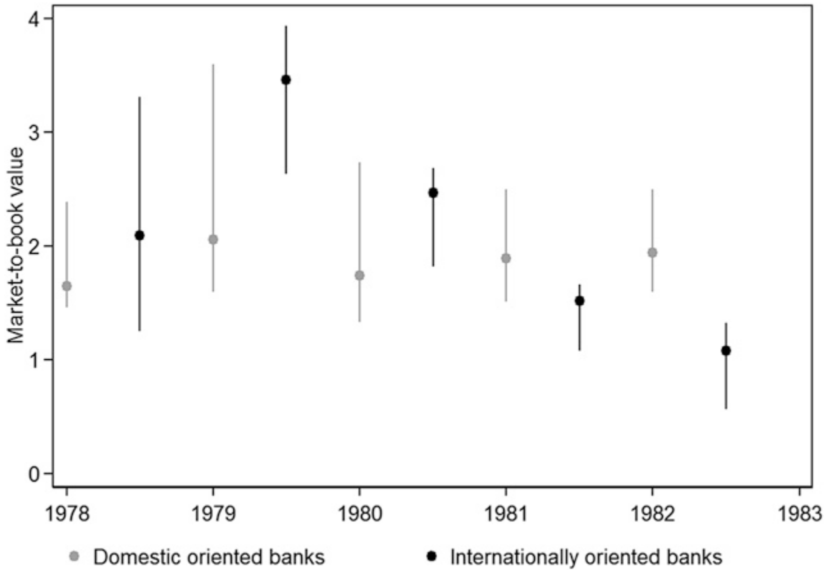

Fig. 4.15 Market-to-book values of international vs. domestic-oriented banks, 1978–1982 (*Source* Bolsa Mexicana de Valores, Anuario Financiero y Bursátil [several issues])

the majority of the shares and the control of the bank. The offer, which in Carral's words was "attractive in terms of cost per share," was analyzed in an extraordinary meeting of the Board of Bank of America in San Francisco.[30] One month before, Espinosa Yglesias had already contacted Citibank and discussed a similar proposal. According to Carral, Espinosa Yglesias was in touch with the authorities of the SHCP and Banco de Mexico regarding the operation, and they were in apparent agreement to allow a foreign bank taking the ownership and control of one of the two biggest banks in Mexico. In the end, neither Citibank nor Bank of America accepted the offer, and Banamex remained in the hands of Espinosa Yglesias and other Mexican private shareholders until its nationalization.

[30] José Carral, 'La banca extranjera y la estatización de la banca', in Amparo Espinosa Rugarcía and Enrique Cárdenas Sánchez (Eds.), *La nacionalización bancaria, 25 años después. Tomo II* (Mexico City, 2010), 117–37, esp. 128–30.