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Playing with Fire? Internationalization and Condition of Mexican Banks Prior to The 1982 Debt Crisis

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Abstract

Large foreign lending and heavy indebtedness of developing countries are main features of international finance in leading to the debt crisis of the 1980s. The high exposure of the commercial banking sector from industrial countries to external debt in the developing world by the time of the Mexican default in August 1982 is well known. However, although importantly involved in foreign finance and the petrodollar recycling process, the condition of commercial banks from debtor countries themselves has been much less recognized and explored. This paper shows that the health and financial position of the Mexican commercial banking sector significantly deteriorated in the years preceding the debt crisis, and that internationalization was an exit option to domestic fundraising difficulties. Economic and financial analysis of the banks' asset and liability structure demonstrate that banks involved in international business had greater risk levels than those operating only in the domestic market, which puts international banking at the heart of the problem. The paper provides new insights into the domestic and international political economy of a lending-borrowing mechanism that led to what was perhaps the largest global financial crisis since the Great Depression.

**JEL Classification:** H63, N26, N86.

**Keywords:** International banking, political economy, Euromarkets, Latin America.
I. Introduction

In practically all studies of the international debt crisis of the 1980s, the high volume of foreign credits granted by commercial banks to developing countries is highlighted as a main determinant. The boom of international lending that took place within the Euromarkets after the oil shock of 1973 as part of the petrodollar recycling process has featured prominently in the analysis of the crisis. The literature on this subject has extensively debated the relationship between the heavy indebtedness of developing countries, especially from Latin American, and the condition and exposure of the commercial banking system of the industrial world. One of the primary concerns of this research has been to explain the economics and political underpinnings of international finance and global debt: consequently emphasis has generally been placed on the interplay between governments, their banking sectors and the borrowers in the setting of a lending-borrowing mechanism that led to what was perhaps the largest global financial crisis since the Great Depression.¹

However, external finance and international lending to developing countries was not exclusive to banks from industrial countries. For long before the crisis, commercial banks from borrowing countries themselves had been expanding their international activities and getting involved in the petrodollar recycling process. Countries such as Mexico and Brazil, represented both major borrowers and lenders in the international capital markets, and have indeed promoted their government-controlled domestic banks or private sector banks to reach the international capital markets.² Involved as partners of European and North American banks these institutions participated in syndicated Euro-lending mainly to their home countries' governments and private sector.³ While often evoked by national historiographies, especially in Latin American countries, this phenomenon is missing in the classical accounts and explanations of the international debt crisis of the 1980s.⁴

Contrary to common wisdom, in the lead-up to the crisis it was not only the solidity and solvency of the banking sector of the industrial world that was at stake, but also that of the debtor countries' own banks which had taken part in the international loan business. Furthermore, the involvement of banks of developing countries in international financial markets begs the question of what was driving their international expansion and, therefore, who encouraged and was responsible for it. Although the role of the international banks of the industrial world at this time has been extensively studied, the condition and the internationalization process of the commercial banking system in developing indebted countries during the 1970s have received very little attention.⁵ Moreover, the crucial question of the relationship and interplay between the banks and policymakers from borrowing countries with the international political and financial establishment that underlies foreign finance and global debt during this period has not been addressed in the literature yet, and, consequently, still remains open.

² “Consortium banks on course,” The Banker, February 1976, pp. 170-171 and
³ The contemporary financial press reported that a good number of debtor nations had financial institutions (including both development banks as well as private banks) which took funds in the international financial markets and then relent the money locally. See, for instance, The Banker and Euromoney (several issues).
⁵ A main exception is Díaz-Alejandro (1985) who has shown, for the case of Chile, the close connection between the massive banking failures of 1981, the international activities of commercial banks, and the external indebtedness process of the public and private sector.
In this paper I assess the condition of the commercial banking sector in Mexico prior to the debt crisis, and explore the domestic political economy of its internationalization process. Several reasons make Mexico an interesting case study to address the questions raised in the previous paragraph. In the first place, Mexico was not only one of the biggest debtors, but also the country whose default in August 1982 triggered the international debt crisis and put the whole global banking and financial system on the brink of collapse. Second, the country's largest commercial banks performed a significant role in intermediating foreign finance with domestic final borrowers, becoming both important borrowers and lenders in the international capital markets. Finally, there are good reasons to assume that the experience of Mexico can be also found in other Latin American countries, such as Brazil and Argentina, whose governments and financial institutions followed similar footsteps.

The paper provides new evidence on the situation of the Mexican banking sector with new information reconstructed from the balance sheets of commercial banks and the Banco de Mexico's annual reports. I show that Mexican commercial banks' funding had progressively deteriorated during the years preceding the debt crisis. Sight and saving deposits, which accounted for 30 per cent of the banking sector total liabilities in 1978, represented only 17.1 percent by early 1982. Likewise, long-term time deposits (one year and over) share to total time deposits declined from 70 to 30 per cent over the same period of time. More striking than falling sight deposits and shortening maturity on time deposits is the fact that it has specially affected leading international banks such as Bancomer, Banamex and Banca Serfin. Moreover, these banks seem to have offset their declining domestic liquidity by increasingly borrowing from foreign banks in the international capital markets. Greater reliance on international liquidity was a higher risk strategy since it consisted of short-term wholesale interbank funding with higher costs than the checking accounts deposits and also because they were denominated in dollars, and therefore exposed to currency risks. Financial analysis of the banks' asset and liability structure shows higher levels of risks for international banks than domestic banks.

I argue that internationalization emerged as an exit option to banks' domestic fundraising difficulties during the early 1970s. After decades of stability, expansion and increasing penetration in the national economy, the raise of the commercial banking sector came to a halt around 1972. On one side, mainly as a consequence of increasing inflation and negative real interest rates, deposits with commercial banks sharply declined in terms of the domestic economic activity. On the other side, lower available funding affected banks' lending activities and led to a significant reduction in the volume of credits granted by the commercial banking sector relative to the GDP. In this context, international finance offered the banks with an alternative profitable way to make up for the loss in local funding and overcome the shrinking participation of the sector in the domestic economy. This was the time in which the oil shock hit the world economy and international banks started the

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8 The other banks involved in international businesses were Multibanco Comercemex, Banco Internacional and Banca Somex. These were Mexico's six larger banking institutions and accounted for as much as 75 per cent of the domestic markets share of commercial banking.
9 Mexican scholars have referred to this phenomenon as a financial disintermediation process. See, in particular, del Angel (2002), Chart 2.1, p. 23 and del Angel (2010), Grafica 15.1, p. 637 and also Quijano (1981), p. 170-180.
petrodollar recycling business that would lead to the boom of foreign lending to the developing world.

Banks involvement with foreign finance could not be achieved, and not even started, without the support of the Mexican government and financial regulators. In fact, the international expansion of Mexican commercial banks took place in a context of important changes in banking legislation and as a process towards domestic financial liberation. The legal reforms of 1974, which authorized domestic banks to operate overseas, as of 1975, replaced the former restricted regime of specialized banking by a more flexible universal banking system that empowered large commercial banks to open offices in the main international financial centres and to get involved in foreign finance. For Mexican policymakers the banks’ engagement in the international capital markets was convenient for at least two reasons. On the one hand, they could channel foreign finance back home and provide the necessary liquidity to finance import substitution industrialization (ISI) policies and the balance of payments. On the other hand, the government itself could benefit from these new financing lines. At an international level, I argue that permitting Mexican banks to take part of the euro-lending business must have been a necessary part of the deal to send petrodollars to the country.

The rest of the paper is structured as follows. The next section shows that in the years leading to the debt crisis the funding base of commercial banks significantly weakened along with increasing risks in the banking sector. In Section III I analyze whether banks involved in international businesses displayed higher risk levels than those operating only at a national scale. Section IV examines the relationship between banks domestic fundraising difficulties and their risk strategies. In the Section V I explore the political economy of commercial banks’ internationalization in Mexico during the 1970s. Based on the analysis of the Mexican case, in the last section, I draw overreaching conclusions linking the international activities of domestic banks and the origins of the Latin American debt crisis of the 1980s.

II. A banking sector in distress: funding difficulties, greater risks

During the crucial period from 1978 to 1982, as Mexico external indebtedness climbed up and the country approached to default, the situation of the domestic banking sector had weakened substantially. Although in terms of the domestic economy the commercial banking sector had strongly expanded its activities during those years, with total assets passing from 14.1 per cent of the GDP in 1978 to 21.3 by the beginning of 1982, a close look at the evolution of balance sheets structure of the sector shows clear signs of distress. Both in terms of their funding and assets composition the banking sector displayed increasing levels of risks at a consolidated level.

A salient feature of the liability composition of the commercial banking system during this period was the persistent reduction in the share of sight deposits. Figure 1.a shows that at an aggregate level checking account deposits declined by as much as half in terms of the sector total liabilities: from over 20 per cent in 1978 to almost 10 per cent by the early 1982. A similar contraction and declining pattern are also observed when considering their evolution relative to the monetary base. Because checking account deposits were the least expensive non-equity source of fund available to commercial banks, had the squeeze of deposits went too far the banks might have been forced to seek for more costly sources of funds usually regarded as signs of financial distress. In fact, as will be

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Kaminsky & Schmukler (2003) found that between 1973 and 1974, Mexico shifted from a repressed financial system towards one that was partially liberalized.
developed in detail below, the contraction of the low cost deposit base for funding had negative repercussions on banks’ risk levels.

< Figure 1 around here >

Along with declining sight deposits the banking sector also suffered from a deterioration of their medium and long term deposit accounts. Figure 1.b exhibits what is a clear transformation in the maturity structure of time deposits from non-financial sectors with commercial banks. While time deposits at one year and over accounted for 70 per cent of total illiquid liabilities in December 1978, they represented 26 per cent by end-1981 and only 18 per cent in June 1982. Conversely, time deposits with maturity within a year accounted for 30 per cent in 1978 but represented as much as 82 per cent by mid-1982. Within them, shorter term deposits (three-month deposits) were the more dynamic component increasing their share from 12 to 47 per cent over the period. For banking institutions, the shortening of deposits maturities reduced the reliance on more stable long-term whilst increasing the needs of short-term liquidity without necessary converting the maturities of their assets as it will be made clear below.11

As striking as the decline in sight deposits and the shortening maturity on time deposits is the increasing role of foreign liabilities of the Mexican banking sector. Information from the Banco de Mexico’s annual reports shows that commercial banks’ obligations with the external sector more than doubled as a share of total liabilities between 1978 and 1982 (see Figure 1.a). Foreign creditors were essentially commercial banking institutions and the liabilities consisted of short-term wholesale interbank credit lines. As evident in Figure 1.a, foreign interbank funding was actually providing the banking sector with the resources it was losing on its checking accounts and the liquidity they were needing to face the shorter term time deposit base. However, since international interbank funding lines had to bear higher costs and were denominated in dollars, they were a much more risky and inconvenient fundraising instrument than the domestic funds they were compensating for.

In addition (and partially related) to the deterioration in the funding base the commercial banking sector also experienced higher risk levels during this period. Although commercial banks’ risk levels will be discussed in much more detail in the following section, I examine here the condition of the banking system through a number of financial ratios derived from the consolidated balance sheet of at a sector level. Balance sheet ratios have already been employed by banking and financial historians to assess the situation of banking institutions in times of financial distress or crisis.12 Moreover, these ratios are very useful tools for examining and assessing banks’ asset and liability

11 The transformation in the maturity structure of the term-deposit funding base and the progressive concentration on three-month term deposits seem to have been the consequence of the evolution of yield structure of deposits. Data from Banco de Mexico historic financial statistics shows that by 1981 there were no major differences in the interest rates paid on three month deposits and those paid on deposits at 1-year and over a year. It seems therefore logic that, in an inflationary context and given pretty similar interest rates, people would prefer to shorten the maturity of their time deposit.

12 For instance, Calomiris and Mason (1997) and White (1984) relied on this kind of indicators to determine the characteristics of failing banks during the U.S. banking crisis of the 1930. The use of financial ratios is also familiar to economists and it has been applied to the analyses of banks distress in contemporary financial meltdowns.
structure, which, in turn, have been identified by previous research on bank risk management as important indicators.\textsuperscript{13}

< Table 1 around here >

Table I shows the evolution of a number of financial ratios between 1978 and end-1981 before the devaluation of the early 1982. Overall, they indicate an increase in the risk levels of the banking sector during the period. The ratio of equity to total liabilities and capital to total assets are considerably reduced during this period, which shows a constant degradation in the sector’s capitalization levels. As for the ratio of loans to total assets, it rises over the period. Although it does not capture the quality of the loan portfolio, it is a proxy of the exposure to the danger of slow payment and default, with higher levels of the ratio indicating greater risks. The ratio of liquid assets to total liabilities displays worsening in the sector’s ability to meet its obligations with liquid assets. Finally, as previously discussed, ratios accounting for the funding structure also show a weakening in the sector financial position. The larger the deposit base, the lower the cost of funds and the stronger the sector would have been. However, the opposite happened while being offset by increasing reliance on higher cost short-term interbank funding.

The rise of financial distress in the Mexican banking system as the crisis approach raises the question of what explains the funding problems and higher levels of risks. In the following sections I turned into this question and analyze in detail the factors driving these problems. Through a bank level analyses that compared international-oriented banks with those operating only at a national level I assess whether increasing risks in the banking sector was related to the international activities of Mexico’s large commercial banks. Since, as will be shown below, these banks were also among the most affected by declining sight deposits, I consider then the extent to which domestic fundraising difficulties are due to bank’s greater risk levels. An argument is made for this situation to farther push the banks to find abroad the liquidity they were losing domestically, which, in turn, increased their risks and exposure even more.

\textbf{III. The tip of the iceberg: domestic vs. international banking}

In this section I analyze whether funding troubles and higher risk levels in the Mexican banking sector was a homogeneous phenomenon or if they affected differently to some banks or group of banks, in particular between international-oriented banks and domestic banks. To shed light on these issues, I use quarterly bank-level information from the Comisión Nacional Bancaria y de Seguros’ (CNBS) \textit{Monthly Bulletin}, which provides data on the balance sheets of commercial banks.\textsuperscript{14} This is the most detailed information available on Mexican commercial banks and has not been used for this purpose before. The period covered here goes from June 1979, sixth month after the first Bulletin was published, to June 1982 before the announcement of Mexican government’s temporary moratorium on external debt principal payments and later nationalization of the banking system.\textsuperscript{15} The analysis

\textsuperscript{13} See Calomiris & Mason (1997, 2003) and Carlson (2010).

\textsuperscript{14} They were published by the Unidad de Análisis Financiero (Financial Analyses Unit) under the name of “Boletín mensual de indicadores y estados financieros de las instituciones de créditos” from 1978 to 1979 and “Boletín de indicadores financieros de la banca múltiple privada y mixta” from 1980 onwards. Publications are available at the Library of the Bank of Mexico.

\textsuperscript{15} The two first quarters are discarded because the bulletins do not include as many banks as the following ones, which would force to considerable reduce the sample in order to have complete time series.
includes 23 Multiple commercial banks for which there is complete and consistent information for the whole period. They represent over 95 per cent of the assets and liabilities of Multiple-banks and as much as 90 per cent of the total commercial banking system.

The prior is that banks involved with international finance would suffer from greater risk levels and larger domestic fund raising problems. Although neglected by the international literature on the debt crisis of the 1980s, national historiographies in Latin America have stressed the involvement of domestic banks in the Euromarkets and in recycling petrodollars to their home countries during the 1970s. For instance, Quijano (1981) estimates that in 32 percent of the US$ 16 billion syndicated Eurocredits granted to Mexico between 1970 and 1979 there was at least some participation of Mexican commercial banks. In a previous work I show that, through their associated consortium banks and foreign agencies and branches, Mexico’s Bancomer, Banamex, Serfin, Comermex, Somex, and Banco Internacional borrowed in the international interbank markets to relend to final borrowers at home. But in doing so they incurred serious maturity, interest rate and currency mismatches and dangerously increased their risk position.16 There is a reason to think, therefore, that there is an important link between international-oriented banks activities and the funding problems and higher risk levels observed in the domestic banking system.

Since there is no information available on the composition of banks' loan portfolio and non-performing assets, I evaluate the risk position of the banks though a comparative analysis of financial ratios reconstructed from their balance sheets. Figure 2.1 and 2.2 plots the mean weighted by size of bank (total liabilities) and the 50 per cent central distribution of the debt-to-equity ratio and the quick ratio respectively for the group of international and domestic banks. Both ratios show considerable higher risk levels for international-oriented banks than for those operating only in the domestic market. The first figure shows that international banks have been much more aggressive than domestic banks in financing their growth with debt instead of shareholders' equity, and how they became faster more leveraged toward the end of the period. The second figure also shows international banks in more risky position when compared to domestic banks. The lower levels of the quick ratio are actually indicating a much more reduced ability to meet their short-term obligations with liquid assets, therefore a worst short-term liquidity position.17

Higher risk levels for international oriented banks are further confirmed when considering a larger number of balance sheet ratios. In Appendix A I develop a Principal Component Analysis (PCA) on ten financial ratios which include those presented in Table 1 plus the ratios equity and reserves to total liabilities, troubled assets to total assets and returns on total assets (see Table B1).18 PCA proves to be a useful methodology here because it allows to extract the most relevant information from the series of financial ratios and to identify the sources of bank’s vulnerabilities as well as the risk factors behind their balance sheet’s structures. The analysis shows that on average international banks displayed slightly lower levels of capital adequacy than domestic banks, and suffered from a much more pronounced declined toward the end of the period. It also demonstrated that the asset’s

16 See Alvarez (forthcoming).
17 The leverage ratio is calculated as equity plus reserves over total assets, and the quick ratio as current assets over current liabilities.
18 These ratios were chose and defined in order to have a comprehensive representation of the banks’ assets and liabilities structures and the risks underlying their balance sheets.
liquidity position of international banks was relatively weaker than domestic banks and that they had a funding structure much more concentrated on short-term funding. As for banks’ assets quality, no clear differences can be observed among banks, with the indicator displaying worst assets quality levels for both groups of banks as the crisis approached.

A special remark needs to be made regarding the evolution of banks’ funding structure. The relative larger reliance on short-term funding by international banks stressed in the previous paragraph was not accomplished by strengthening of low cost deposit funding base but through short term high cost interbank borrowing or “hot” funds. In fact, the problem of declining sight deposits already mentioned has particularly affected to international banks, which persistently diminished the share of short term deposits as a source of funding between 1978 and 1982.19 Moreover, as previously posited, Figure 3 clearly shows that interbank funding seems to have provided these banks with the resources they were losing on their checking accounts.20 Unlike them, domestic banks also suffering from significant declines on checking accounts deposits, such as Banco Occidental de Mexico, Multibanco Mercantil de Mexico, Banco Mercantil de Monterrey and Banco Continental, did not increase borrowing from banks while managing to maintain a fairly stable share of the commercial banking sector’s total liabilities. In fact, since their balance sheets exhibit corresponding increases on time deposits, it looks like depositors were converting sight accounts into time deposits without necessarily withdrawing the money from the banks. 21

< Figure 3 around here >

The fact that there were no liabilities with the domestic non-banking sector offsetting the declining share of sight deposits with international banks raises the questions of what explain this contraction and where was all this money going. This is a very important concern in a context in which the banks would be accused by the government of running speculative attacks against the Mexican peso and were eventually made responsible of the wave of capital flight affecting the country. 22 Given the lack of an international network for small domestic banks and the much limited presence of foreign banks in Mexico back during those years, international banks were in a good position and loomed as natural candidates to carry the outflow of dollars. I the next section I explore the determinants of the performance of sight deposits with commercial banks and explored whether domestic fundraising difficulties related to banks' risk levels.

IV. The microeconomic determinants of banking problems

The squeeze on domestic funds was an issue of major concern for the bankers themselves. At the Mexican bankers’ annual convention in Acapulco in June 1980, they underscored the hard time banks

19 Of the remaining 16 domestic commercial banks considered here, only Multibanco Mercantil de Mexico and Banca Continental performed a similar trend. As for the rest, sight deposits either consistently increased their share as a source of funding, such as in the case of Credito Mexicano and Banca Cremi, or alternated years of increasing or declining share on the banks’ liabilities.

20 Recall that Banca Promex belonged to the Group Mexicano-Somex.

21 Access to the vast international interbank market may be decisively related to the higher recourse by Bancomer, Banamex, Banca Serfin, Multibanco Comermex, Banca Somex-Mexicana and Banco Internacional to bank borrowings when compared with the rest of commercial banks. For the latters, borrowing from banks was only limited to national institutions and to a much narrower domestic interbank market.

were having in capturing and absorbing new deposits. Bankers argued that this problem was due to the inflationary process affecting the country and to the direct competition for savings from government papers such as the certificados de tesorería (Cetes) and, to a lesser extent, from the stock exchange. For their part, the officials reply to the delegates' complaints hinted at trouble in the banking sector that could be linked to reluctant depositors. At the meeting, Gustavo Romero Kolbeck, the central bank president, pointed out that the Bank of Mexico "has been bailing out banks which have over-committed themselves in the extension of credit to customers." It seems important, therefore, to analyze whether difficulties in raising new deposits were related to microeconomic factors and the higher risks observed on banks' balance sheets, or if these were different and unrelated problems.

The empirical strategy is to relate the evolution of sight deposits with a number of variables accounting for banks' risk levels. The basic idea is to test whether bank risk level is associated with differential changes in sight deposits accounts. The statistical model employed is a panel data regression in which the dependent variable is the quarterly percentage change of sight deposits from the domestic non-banking sector with the bank, and explanatory variables are the first four principal components in the prior quarter. As mentioned in the previous section and discussed in much more detail in the appendix, these components can be respectively identified as indicators of banks' capital adequacy, their liquidity position, the maturity structure of their funding base and the quality of their assets. The Consumer Price Index (CPI), the ratio of Cetes yield to the average interest rate of banks' deposits, and total assets are included to control for the effects of inflation, alternative saving instruments, and the size of the bank respectively. The prior would be that, everything else equal, riskier banks should be the ones displaying lower growth rates on liquid deposits, reflecting the decision of reluctant depositors that may want to diminish their exposure with them.

A number of reasons favor the use of the first four principal components instead of the original financial ratios as explanatory variables. First of all, the principal components provide with much clearer and robust indicators of the riskiness of the banks than the balance sheet ratios they were derived from. Second, many of the original financial ratios are very similar measures and it is not clear which of them should be included in the regression and which should be leave apart. That is the case, for instance, of the ratios equity to total assets, total capital to total assets and reserves and equity to total liabilities which are all indicators of the capitalization level of the bank. Finally, for this reason but also due to the fact that financial ratios vary between zero and one, a high degree of multicollinearity is observed when running the panel data regressions on the original variables. In short, not only is the risk perception given by principal components clearer, but they also provide with uncorrelated predictors that incorporate most of the information contained in the original financial ratios.

Table 2 reports regression results under four alternative specifications. Model 1 regress sight deposits growth rate on principal components variables only, while regression 2 includes control variables inflation, cetes and total assets. Regression 3 adds an extra control variable for time effect.

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23 In fact, by that time the Bank of Mexico was providing significant amounts of fund in special "auctions" to help commercial banks meet the reserve requirements. "Bankers' hard-luck stories fail to move government," Latin American Weekly Report, WR-80-25, 27 June 1980, p. 7.
24 Recall that these four principal component account for as much as 81.6 per cent of the variation of the financial ratios data set (See Table A1.).
and in regression 4 I include a lag of the dependent variable for one period in order to take into account for the potential influence of the past behavior of sight deposits accounts. All four models include fixed effects for the banks and therefore controls for potentially important unobserved heterogeneity among banks. 25

< Table 2 around here >

The results are consistent with the idea that banks with higher levels of risks are the ones suffering the most from deposits taking difficulties. The coefficients indicate that a worsening on banks’ liquidity position (decrease in PC2), a shortening on the maturity of the funding base (increase in PC3) and deterioration on assets quality (increase in PC4) have significant negative impacts on the growth rate of sight deposits accounts. Contrary to expectations, the coefficient on PC1 is negative although not statistically significant: at best, no link is found between banks capitalization levels and deposits growth. As for control variables, inflation has the expected negative impact on non-interest bearing deposits in models 3 and 4, while the relative yield of alternative saving instruments to interest rates paid by banks also has a negative effect on deposits and it is significant in regression 4, which is the most comprehensive model. The coefficient of total assets is negative, which would indicate that large banks had a harder time in capturing and absorbing new deposits than smaller banks. This is consistent with previous discussion about big international banks being among the most affected by domestic fundraising difficulties. As for the lagged dependent variable, its coefficient indicates that an increase in sight deposits of 1 per cent during the previous quarter is estimated to reduce current deposits growth rate by 0.3 percentage points, which is contrary to what one would expect.

An implicit assumption behind this analysis is that depositors were aware about the financial condition of the banks, and that deposit decisions depended on their perception of banking risk. One way to check for this hypothesis consists in comparing the evolution of banks’ sight deposits accounts and their stock prices. Since stock prices were daily informed and published in the financial press, had depositors considered the condition of the banks in placing their deposits, one would expect a close relationship between banks’ sight deposits accounts and share prices. Figure 4 shows that the declining portion of sight deposits as source of financial resources for Bancomer, Banamex and Banca Serfin went pretty much hand-in-hand with falling share prices. Banca B.C.H, the largest banks in the group of domestic banking institutions, provides with a counter example that confirms the rule: the ratio of sight deposits to total liabilities does not fall with stock prices following a similar course. This suggests that depositors’ behavior is not explained by broad macroeconomic factors but that they were rationally reacting to changes on the individual condition of the banks. 26

< Figure 4 around here >

25 The Hausman test has been pursued to evaluate whether fixed effects or random effects should be used, with results indicating that the fix effect specification is the preferred model in all the cases.
26 Unfortunately, it is not possible to generalize this analysis to the whole sample of the 23 commercial multiple banks because not all of them issued shares nor were they monthly listed on the stock markets. In addition to the four banks considered above, Multibanco Comermerex and Banca Confía also have a complete series of stock prices for the period under analysis. Both banks performed to the same pattern as well.
It is now interesting to analyze whether there were differences on the performance of sight deposits accounts of international and domestic banks due to other factors than those included in the regressions. Since time-invariant factors cannot be directly considered in fixed effects models, interactions of a zero-one variable for domestic-international banks with quarter dummies are included. The estimates of this interaction terms are calculated under the four models of Table 2 with no clear results. Coefficients alternate positive and negative signs among quarters and between the different regressions, and in the bulk of the cases they are not statistically significant. This means that there is no evidence about differences on deposits growth between both groups of banks all else being equal. In other words, given the same level of risks and of the rest of the variables, the performances of sight deposits accounts of international banks was not less nor greater than for domestic banks. These results do not seem consistent with the previously discussed idea that, in a freely convertible currency system, international banks might have been channeling liquidity out of Mexico through their foreign network.

Two main conclusions can be drawn from the analysis developed so far. First, the weakening of the condition of Mexico’s domestic banking sector between 1978 and 1982 laid, at least partially, on the international activities of large commercial banks, which have taken increasingly and progressively risky positions on their foreign businesses. Second, the problem in raising domestic funds and increased risk levels were related, with greater risk strategies leading to rising troubles in capturing and absorbing new deposits. As a result, banks entered into a vicious circle or spiral effect in which the scarcity of domestic funding pushed them to increase short-term high cost borrowing from foreign banks which, in turn, increased risk levels and reinforced domestic fundraising difficulties. This situation begs the question of how come the banking sector got involved in such a delicate position and who was responsible for the higher risk they were taking. I now turn into the factors driving the international expansion of Mexican banks and the political economy of banking internationalization during the 1970s.

V. A political economy account of Mexican bank internationalization

The domestic fundraising difficulties confronted by the banking sector during the late 1970s and early 1980s were not completely new to Mexican bankers. In fact, commercial banks have suffered from a considerable deceleration on domestic funding already by the beginnings of the 1970s. As Quijano (1981) estimates show, commercial banks domestic resources increased by 1,7 per cent annually between 1971 and 1978 in real terms, while the average annual growth rate during the periods 1956-1960 and 1964-1970 was 10,2 and 18,1 per cent respectively.²⁷ By the beginnings of the 1970s Mexico was entering into an inflationary process that would lead to negative real interest rates and thereby affect the deposit funding base of the commercial banking system (Cardero, Quijano, & Manzo, 1983; Quijano, 1987).

The minutes of the Executive Committee of Banamex witness the serious difficulties of the banking sector with regard to domestic financial resources. During their weekly Wednesday meeting, Banamex’s General Director Agustin Legorreta would periodically talk about the scarcity of cash resources and the slow evolution that deposits accounts were showing during 1971 and 1972. Funding difficulties went beyond the case of Banamex, since as he stressed, “the situation was not

²⁷ The average annual growth rate of the GDP was 6 per cent for the period 1956-1960, 6,4 per cent for 1964-1970, and 5,6 for 1971-1978.
exclusive to [their] bank, but general to all the credit institutions of the country, particularly affecting
to small institutions which have been failing to meet their legal deposits.”

According to Legorreta, the lack of funding was further aggravated by the raising demand of credit that banks were facing from both the private and especially the public sector, which, as he pointed out "was exerting strong pressures on the credit institution for financing.”

As a matter of fact, funding difficulties came along with a reduction of banks' lending capacity and a retrenchment of their assets and credit portfolio. As del Angel (2002, 2010) has observed, after 25 years of continuous expansion both credits granted by private and mixed commercial banks as well as their total assets significantly declined as a share of the GDP since 1972 and only started to recover very late in the decade. This decline is mainly explained by a contraction of the credit supply of commercial banks since the Mexican economy continued to grow and the demand of credit expanded during this period. At that time Mexico, as well as other Latin American economies, was undertaking the final stages of the import-substituting industrialization (ISI) process and bank lending was a major piece of the funding strategy.

It is within this context of poor funding and raising demand of credit that Mexican banks turned to the international capital markets. The case of Banamex, a leading financial institution and a pioneer in international finance in Mexico, illustrates the pattern. In fact, as the minutes of the Executive Committee show, the need to look at the Euromarkets and to get involved in international banking was largely motivated on the "impossibility to meet the domestic demand of credit with domestic resources." The bank position was that, as Legorreta put it to the members of the Committee, if they did not involve in the international capital markets “they would be condemned to be a mere supplement of foreign banks,” which were ready (and beginning) to provide the funding the country was demanding to finance its economic development at lower very attractive interest rates.

The first incursion of Banamex into the Euromarkets, as well as of other Mexican banks, was through the creation of London-based consortium banks in association with large foreign banks. By 1974, the three larger Mexican banks Bancomer, Banamex and Banca Serfin have respectively set the Libra Bank, Intermex and the Eulabank in London to operate in the Euromarkets. Since the very beginning these banks participated in international lending activities and became later important suppliers of Eurocredits to Mexican borrowers. Banks' next step forward in international banking was the opening of their own agencies and branches in main international financial centres towards the end of the decade. Through their access to international interbank liquidity, overseas offices become an indispensable piece of the funding structure and lending capacity of parent banks. In the words of its General Director, by 1980 Banamex "could not serve nor meet the need of their big clients if [they] could not count on resources coming from abroad."

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28 Banamex’s archives, Libro No. 2 de Actas de la Comisión Ejecutiva, Meeting of August 11, 1971.
29 Idem.
30 See, in particular, del Angel (2002), Chart 2.1, p. 23 and del Angel (2010), Grafica 15.1, p. 637.
31 See Bértola & Ocampo (2012).
32 Banamex’s archives, Libro No. 3 de Actas de la Comisión Ejecutiva, Meeting of February 9, 1971.
33 Idem.
34 In the words of the Mexico City manager of Intermex Hector Reyes Mexican banks "went to London to borrow Eurodollars to lend to Mexico." Source: "World Push by Mexican Banks Irks Rivals," The New York Times, April 18, 1981.
35 Banamex’s archives, Libro No. 12 de Actas de la Comisión Ejecutiva, Meeting of March 12, 1980.
But Mexican banks internationalization could not be achieved, and not even stated, without the consent and support of the Federal government and financial regulators. In 1974 an important reform was made to the banking law in order to allow the presence of Mexican banks in the international capital markets. More specifically, the amendment explicitly empowered domestic banks to participate in the capital stock of foreign financial institutions and to open agencies and branches under previous authorization by the Secretary of Finance.\(^{36}\) For Mexican banks willing to get involved in the Euromarkets this was a major reform since until then the participation of domestic banks in international finance was not contemplated in the national banking law. These changes aligned with other measures taken by the Mexican financial authorities tending to soften controls on banks and liberate the domestic financial sector.\(^{37}\)

For the Mexican government the involvement of domestic banks with foreign finance was desirable for at least two reasons. On the one hand, access to the international money markets would provide the banks with the necessary liquidity to finance the balance of payments, the public and private investments of the ISI policies, as well as the investments needed to exploit the oils reserves recently discovered. On the other hand, the government itself could benefit from an improvement of the lending capacity of commercial banks. Moreover, as noted above, the government seemed to have been putting pressure on the banks for financing that they were not being able to afford with domestic financial resources. By way of example, in the meeting of August 29, 1973, Agustín Legorreta informed the Committee about a conversation he had with Ernesto Hernández Hurtado, General Director of the Bank of Mexico, about the financial needs of the Federal government. Hernández Hurtado had told him that the government would need 2.000 million pesos (approximately 160 million dollars) to cover public spending until the end of the year and that he was expecting main private banks to provide with the financing.\(^{38}\)

Indeed, the government itself was interested in a direct participation in the Euromarkets through state-own financial institutions. When discussing about possibility of creating a Multinational Bank in London, Secretary of Finance’s officials did not only gave the green light to Legorreta’s project but also expressed that “[they] have been actually thinking about the formation of an institution like the Eurobras set up by the Brazilian Government, which would involve the joint participation of official financial institution like Nacional Financiera S.A. and Somex with private banks.”\(^{39}\) Government’s willingness would become true in 1978 when Nacional Financiera and Banco Nacional de Comercio Exterior finally brought into Intermex, the main Mexican consortium bank operating in London, buying 13 per cent of the shares each.\(^{40}\) Moreover, although with relatively little participation in

\(^{36}\) The Multiple bank reform of 1975 might have also favor the internationalization process. As argued by Cardero et al. (1983, p. 96), because it implied the consolidation of assets, Multiple bank allowed Mexican financial institutions to place themselves in the international capital markets as bigger players, with a much higher volume of business. In fact Banamex and Bancomer were the major Latin American commercial banks.

\(^{37}\) See Kaminsky & Schmukler (2003).

\(^{38}\) Banamex’s archives, Libro No. 6 de Actas de la Comisión Ejecutiva, Meeting of August 29, 1973.

\(^{39}\) Banamex’s archives, Libro No. 3 de Actas de la Comisión Ejecutiva, Meeting of August 9, 1972. In Legorretas’ opinion “the federal government saw with good eyes the intermediation of Mexican banks in the international markets, even as a help to maintain secondary markets of the Mexican securities placed in the international capital markets.” Banamex’s archives, Libro No. 3 de Actas de la Comisión Ejecutiva, Meeting of February 9, 1971.

\(^{40}\) Banamex remained the main shareholder and together Mexican financial institutions obtained a 51 per cent controlling interest of the bank.
foreign lending, two of the six international-oriented banks, Banco Mexicano-Somex and Banca Internacional, were majority owned by the Mexican government.

The arrival of Mexican banks in major financial centres was also welcomed by the international financial community. Both in London and the United States, which were the two main destinations of Mexican banks, local authorities celebrated and eventually authorized the creation of consortium banks and the opening of branches and agencies to operate in their big international money markets. As for international banks, not only did they associate with them in the setting of joint venture banks but they also supplied them and their foreign agencies and branches with wholesale interbank liquidity to fund their international lending activities. Making Mexican financial institutions part of the eurolending business might have been a necessary arrangement for developed countries' governments and international banks, or otherwise they would have never been allowed to send petrodollars to the country.

With hindsight, internationalization emerged as an exit option to banks domestic funding difficulties and lending activities during the early 1970s. It was in the interest of Mexican commercial banks, but also of Federal government as well as the international financial community, to let them get involved in the Euromarkets and the petrodollar recycling process. But the expansion of banks international business created new vulnerabilities and exposures on the domestic banking system. In intermediating foreign capital with local final borrowers Mexico’s large commercial banks took progressively and increasingly riskier positions. Higher risk levels damaged the confidence of depositors with the banks, and thereby hampered the domestic funding base again towards the end of the decade. Banks domestic fundraising difficulties increased their dependence on international interbank liquidity, which, in turn, reinforced their risks management strategies and the domestic funding problems.

VI. Conclusions

This study of the internationalization and condition of the Mexican banking sector prior to the government default of August 1982 shows that in the run-up to the debt crisis the situation of the domestic banking system significantly deteriorated. The fact that these problems have especially affected to leading commercial banks involved in international finance and foreign lending when compared with banks operating only at a national level is revealing. It suggest that internationalization was at the core of the weakness and fragility of the domestic banking system.

Raising distress in the banking sector was twofold. On the one hand, checking deposits accounts retrenched their share on financial resources whilst depositors were also shortening the maturities of their long term time deposits. On the other hand, banks’ capital adequacy strongly weakened as well as their ability to meet their short-term obligations with liquid assets, that is to say their short-term liquidity position. Indeed, banks’ domestic fundraising difficulties and higher risk levels were related to each other and triggered a negative feedback for the group of international banks. Confronted with difficulties in capturing and absorbing new deposits, through their branches and agencies in London and the U.S., these banks increased borrowing from foreign banks and made up the liquidity they were losing in the domestic market. But this came with the cost of higher risks, which further

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41 Legorreta’s reports about the visits and talks with US and European financial authorities and bankers underscored the welcoming reactions the projects of internationalization received among them.
aggravated the domestic fundraising troubles and, in turn, reinforced the dependence on foreign finance.

Also revealing is the fact that banks have been already confronted by funding difficulties at the time their internationalization process started. I argue that leading commercial banks first turned to the international capital markets to overcome serious fundraising problems suffered in the domestic market at the beginning of the 1970s. At a moment in which lot of financing was needed in Mexico and domestic financial institutions were having hard times in providing the funds, the rise of international finance and foreign lending put the banks under the pressure of strong competition from foreign banks but also provide them with a timely and profitable alternative to make up for domestic problems. This suggests that the internationalization of the Mexican banking system was not only the result of international economic and financial forces but that there were also domestic reasons that pushed the banks and policy makers to go abroad.

An important issue this paper raises is with respect to the exposure of the domestic banking system to default in 1982. Lot of works have stressed and focused on the exposure of the banking sector of industrial countries to the debt in Mexico and other developing countries in risk of default. For instance, Cline (1984) estimates shows that the exposure of US banks in nonoil developing and Easter European countries raised from 130.2 percent of capital in 1978 to 155 in 1982 which he states is high. In Mexico, the portfolio of credits in dollars with the Mexican government represented 80 percent of the capital of commercial banks in 1978 and 163.7 in June 1982 which is also high. However, if we add dollar claims with the Mexican private sector and with other developing countries the ratio more than trebled, which is extremely high.

Two important implications that stem from considering the condition and exposure of the Mexican banking sector in the leading to the debt crisis are with respect to bank nationalization and the country's debt renegotiating policy. Although traditionally considered as an ideological and economically unjustified decision, a number of scholars have wondered whether the nationalization that followed Mexico’s default cannot be understood as a measure to rescue a banking sector on the edge of bankruptcy. The findings of worsening funding conditions and increasing risk levels do raise concerns about the liquidity and solvency position of domestic banks in the face of the crisis. In particular, the important group of commercial banks engaged in intermediating foreign finance and foreign lending were crucially exposed to the risk of default and further devaluation of the peso during the second half of 1982. With their balance sheets suffering from serious mismatches, the retrenchment of foreign banks' lending, and their medium and long-term dollar loans restructured while interbank deposits, which had been used as the basis for those loans, keeping their original short-term maturities the prospects of insolvency look far from promising.

As for debt renegotiating policies, there is a large consensus among scholars that refinancing terms and debt restructuring conditions were highly unfavorable for Mexico, as well as for other highly indebted Latin American economies, and that the burden of the crisis was mainly supported by debtor economies. Much less agreement exists, however, about the reasons explaining for the lack of determination of debtor’s governments and their weak bargaining position when facing international creditors. Collective action and coordinating difficulties among debtors, creditors’ side payment concessions to dissipate political tension, debtors’ finance ministers sympathy to the market-based

justifications for the rescheduling terms and the market opening adjustments that the creditors demanded, as well as concerns about foreign trade and financial retaliation are among the reasons advanced in the literature to account for debtors tolerance and acceptance of creditors' rescheduling conditions. This paper provides with a new insight and suggests, therefore, the importance of considering Mexico's external debt renegotiation policy as imbedded in the necessity of policy makers to deal with a domestic banking sector in serious distress and highly involved with, and dependent on, foreign finance.
References


TABLES AND FIGURES

Figure 1. Evolution of Commercial Banks Funding, 1978-1982

Source: Banco de Mexico’s Annual Report (several issues).

Figure 2. Risk levels of international vs domestic banks, 1979-1982

Note: Debt-to-equity ratio = Total Liabilities / Total Equity

Note: Quick ratio = Current Assets / Current Liabilities

Source: CNVB Multibank Bulletin (several issues).
Figure 3. Change in the share of deposits and bank borrowings to total liabilities, 1978-1981

Note: Computations for Banco Mexicano-Somex, Banca Internacional, and Banco del Noroeste correspond to the years 1979 and 1981.

Source: CNVB Multibank Bulletin (several issues).

Figure 4. Evolution of sight deposits accounts and banks’ stock prices, 1978-1982

Source: CNVB Multibank Bulletin and Anuario bursátil (several issues).
### Table 1. Balance sheet financial ratios for the commercial banking system, 1978-1981

<table>
<thead>
<tr>
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<td>Time Deposits / Total Liabilities</td>
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<td>Sight Deposits / Total Liabilities</td>
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<td>43.0</td>
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<td>Foreign Interbank Borrowing / Total Liabilities</td>
<td>10.0</td>
<td>10.6</td>
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Source: Based on Banco de Mexico’s annual reports (several issues).

### Table 2. Regression Analysis. Dependent variable sight deposits growth rate.

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<tr>
<th>VARIABLES</th>
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<th>Model 3</th>
<th>Model 4</th>
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<td>(0.00982)</td>
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<td>(0.114)</td>
<td>(0.334)</td>
<td>(0.400)</td>
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<td>Cetes</td>
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<td>-0.0848</td>
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<td>(0.0721)</td>
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<td>Total assets</td>
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<td>-0.245***</td>
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<td>(0.0685)</td>
<td>(0.0717)</td>
<td>(0.0905)</td>
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<td>Time</td>
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<td>0.118***</td>
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<td>-0.291***</td>
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<td>(0.0235)</td>
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<td>(0.0693)</td>
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<td>Sight deposits growth rate</td>
<td></td>
<td></td>
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<td>(t-1)</td>
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<td>0.709</td>
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Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Note on independent variables:
Capital adequacy: Higher values of PC1 indicate better capitalization levels.
Liquidity position: Higher values of PC2 indicate a better liquidity position.
Funding maturity: Higher values of PC3 indicate a shorter term funding structure.
Asset quality: Higher values of PC4 indicate worst asset quality levels.
Variables Inflation and Cetes are calculated as the natural logarithm of the CPI and of the ration of Cetes yield to the average of banks' domestic cost of borrowing respectively.
APPENDIX A

Financial ratios, risk level and principal component

In this appendix I study the differences of risk levels between international and domestic banks through Principal Component Analysis (PCA). By reducing the dimensionality of the dataset it allows to identify the main factors driving the variability of the data. PCA is used here to extract the most relevant information from the series of financial ratios and to identify the risk factors underlying the balance sheets of banking institutions. In what follows, I explore the correlation (factor loadings) between principal components and the original financial ratios in order to interpret their meaning and investigate for patterns and/or distinctive features among banks when comparing them with banks' component scores.

One single application of the principal component method is performed to the entire set of panel data that includes ten financial ratio series on each of 23 commercial banks for the 13 quarters from June 1979 to June 1982. Four components are found to have eigenvalues larger than one and will, therefore, be kept to perform subsequent analysis. They account for 81.5 percent of the variation of the data set, of which 32 percentage points correspond to the first principal component, 22.3 to the second, and the remaining 27 are equally distributed among the last two components. The variation explained by each component as well as the factor loadings are reported in Table A1.

| Table A1. Principal Components Analysis, Financial Ratios, II-1979 / II-1982 |
|-----------------------------------|----------|----------|----------|----------|
| Troubled Assets / Total Assets    | 0.1139   | 0.0745   | 0.1878   | 0.6578   |
| Loans / Total Assets              | 0.0005   | -0.6772  | -0.0115  | -0.1158  |
| Liquid Assets / Total Assets      | -0.0208  | 0.6898   | -0.0586  | -0.0644  |
| Equity / Total Assets             | 0.5027   | -0.0887  | -0.2374  | 0.2229   |
| Total Capital / Total Assets      | 0.5135   | 0.0565   | 0.1606   | -0.1217  |
| Equity and Reserves / Total Liabilities | 0.5844   | -0.0249  | -0.0428  | 0.0348   |
| Returns on Assets                 | 0.0741   | 0.0206   | 0.1062   | -0.6304  |
| Interbank Borrowing / Total Liabilities | -0.2281  | -0.0427  | 0.6184   | 0.1995   |
| Time Deposits / Total Liabilities | -0.1357  | 0.1183   | -0.5487  | 0.0363   |
| Sight Deposits / Total Liabilities| 0.2295   | 0.1791   | 0.4272   | -0.2133  |

Percent of variation explained

<table>
<thead>
<tr>
<th>Comp1</th>
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<th>Comp3</th>
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<tr>
<td>32.04</td>
<td>22.31</td>
<td>13.77</td>
<td>13.46</td>
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Source: Based on CNBS Bulletin (several issues).

As observed in Table B1, three of the ten original financial ratios, the ones referring to bank's capitalization levels, are the most strongly correlated with the first principal component: equity to total assets, total capital to total assets, and equity and reserves to total liabilities.\(^{43}\) The component increases with higher values of these ratios, which suggests that it can be viewed as a measure of the capital adequacy of the banks with lower values indicating worst capitalization levels. Component

\(^{43}\) The threshold is set at 0.4 and, thereby, only factor loadings larger than 0.4 in absolute terms (in bold in Table B1) are retained for the analysis.
scores show no bank or group of banks following a clear distinctive pattern or with consistent higher or lower values than the others.\textsuperscript{44} Instead, what can be observed is a general deterioration on commercial bank's capital adequacy throughout the years. Figure A1 plots the weight average and the 50 percent central distribution of the components scores for the group of international and domestic banks. There is clear downward trend in the scores of the first principal component for both groups banks (see Figure A1.a), with international banks displaying a slightly lower average than domestic banks and suffering from a more pronounced decline by the end of the period.

Greatest differences between the group of international and domestic banks can be observed on the following two components. Factor loadings for the second principal component shows a strong association with the variable loans to total assets (negative) and liquid assets to total assets (positive). Higher values on this component are, therefore, associated whether with a better ability of the banks to meet their obligations with most liquid assets and/or with lower exposure to relatively illiquid assets (loans). This suggests that the component can be considered as a measure of bank's assets liquidity. Figure A1.b shows no clear differences in banks' asset liquidity until mid-1981, with both groups of banks moving away from each other from there on. While there is a clear improvement on the component scores of domestic banks, values for international banks decreased until the end of 1981 and stagnate from thereafter. These lowers scores of international banks with respect to domestic banks would be indicating a relatively weaker situation on their liquidity position.

As for the third component, it displays high loadings on the ratios time deposits to total liabilities, sight deposits to total liabilities, and borrowing from banks to total liabilities, all of which are indicators of the banks' funding structure. Correlation is negative with the former and positive with the latter two, meaning that banks with higher values of this component would tend to have relatively lower ratios of time deposits and, conversely, higher shares of sight deposits and bank borrowings. This contrast between short terms instruments with long term ones would suggest that the component provides with a measure of the maturity composition of the financing of the banks with high scores indicating a funding base with higher participation of short term funding. Figure A1.c illustrates international banks as a distinctive group in terms of the funding structure with higher average component scores during the whole period. This result shouldn't be surprising since, as previously discussed, during these years international banks have been considerable increasing their recourse to short-term interbank borrowing in the international capital markets while suffering from domestic fundraising difficulties.

Finally, the forth principal contrast the variable return on assets (roa) with the ratio troubled assets to total assets. Since correlation is negative with the former and positive with the latter, it appears that this component represents characteristics accounting for the quality of the assets of the banks. Banks' with higher scores on the component would be associated with lower relative levels of returns and higher shares of troubled assets, and therefore poor assets quality. Component scores show no evidence of significant differences between both groups of banks. It is worth noting that components scores raise for both banks toward the end of the period, indicating a general deterioration on banks' assets quality as the crisis approached (see Figure A1.d).

\textsuperscript{44} Banco Occidental de Mexico, which is among the smallest banks of the sample, is the only exception with components scores above the rest for most of the period.
Figure A1. Principal component scores by group banks, II-1979 / II-1982

Source: CNVB Multibank Bulletin (several issues).