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“The Tequila Banking Crisis in Argentina”

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The Tequila Banking Crisis in Argentina

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Introduction

This article studies the main consequences that the Mexican crisis of December 1994 had on Argentina's financial system. It describes the development of events, the institutional and structural characteristics of the Argentine financial system at the moment of the Mexican devaluation, and the extent to which these factors contributed in increasing or reducing the impact of the shock. The measures adopted in response to the crisis and their effectiveness are also considered. A summary of other articles analyzing the banking crisis which began in Argentina due to the "Tequila" effect is included as well.

1. The Mexican Crisis

1.1. The Events in Mexico

Several different factors seem to have contributed to the outbreak of the Mexican crisis. Political turmoil during 1994, the bad shape of Mexican macroeconomic fundamentals, and external factors such as the rise in international interest rates, had been affecting the behavior of financial markets during 1994 (Folkerts-Landau and Ito 1995). According to Garrido (1996), the institutional design of the financial system and its regulatory framework, added to its vulnerability to external pressures and its limited development, were the main determinants of the December 1994 Mexican crisis.

On December 20, 1994, the Mexican Central Bank established the widening of the exchange rate bands, which resulted in an immediate 15% devaluation of the Mexican currency. The devaluation of the Mexican peso continued, and the fall in international reserves deepened, leading the authorities to announce the floating of the peso two days later. The growing selling pressures observed during the following days were exacerbated by two factors: on one hand the value of the Mexican debt in Tesobonos, short-term securities denominated in pesos but indexed to the dollar, grew quickly as the peso devaluated, and on the other hand, the growth in domestic interest rates increased the proportion of non performing loans in the banking system, mainly because most of the loans had floating interest rates which reflected promptly the increased market rates (Folkerts-Landau and Ito 1995).

The recovery of confidence only began when a package of multilateral aid was agreed with the United States. The Mexican government was also forced to launch a new adjustment and stabilization program, which included cuts in public expenditure and substantial increases in fiscal revenues. On January 2, a \$18 billion loan agreement was announced, half of which would be granted by the American government. The rest of the package would be provided by the Canadian government and the BIS (Bank for International Settlements). Although on January 12 president Clinton had proposed a program guaranteeing the Mexican debt, opposition in the American Congress led to the

replacement of this plan with a \$50 billions package of direct assistance². This new external aid package was approved by the IMF on February 1, although negotiations between the Mexican and American governments did not end until later that month. When, on March 9, the Mexican authorities announced the new stabilization plan, the Clinton administration authorized the release of the first \$3 billions of the agreed credit.

Before it was solved, the Mexican Crisis extended its negative effects to other emerging economies, being Argentina among the more affected.

1.2. Spillover Effects of the Mexican Crisis

The confidence crisis triggered by the Mexican devaluation reached the emerging markets. Argentine and Brazilian stock exchanges indexes fell substantially, although other Latin American economies were not as significantly affected. On the other hand, the Asian and the industrialized western countries stock markets evolved favorably after the Mexican peso devaluation (Folkerts-Landau and Ito 1995).

Brady bonds prices fell in most Latin American countries. The spreads on these bonds over comparable American Treasury securities grew, increasing country risk.

Brady bonds return correlation between the Latin American emerging economies grew substantially after the crisis (Folkerts-Landau and Ito 1995). Ganapolsky and Schmukler (1998) find empirical evidence of the increase in the co-movement among these and other financial variables in those countries affected by the Mexican shock. These authors analyze, more specifically, how changes in external factors impacted Argentine financial markets. The close integration of Latin American capital markets and the developed markets, probably explained by a more intense participation of international investors in emerging economies, determined a high correlation among the main financial variables in these countries. According to the authors, this tends to increase the extent to which an external shock such as the Mexican devaluation affects other economies. In particular, bonds and stock prices in Mexico, Argentina, Chile, and Brazil moved together in response to the Mexican crisis³. Furthermore, the correlation among these variables increased drastically during this period relative to pre-crisis levels. This could be explained by common fundamentals, similarities in institutional design, or by the reaction of investors who could have perceived resemblances between these markets. However, the study also shows that the correlation among Argentinean, Mexican and American interest rates was not too significant, probably due to differences in the monetary policies adopted by each country. Apart from this, it was found that North American and Latin American capital markets were not affected by the same factors.

² This package included 20 billion dollars from the United States, 18 billion from the IMF, 10 billion dollars from the BIS, and 2 billion dollars from commercial banks.

³ Ganapolsky and Schmukler (1998), study the impact of the Mexican crisis on Latin American capital markets, using two different techniques: the correlation matrix and factor analysis.

2. The Tequila Crisis in Argentina

Part of the existing literature on the impact of the Mexican devaluation on Argentina's financial markets has tried to link the main structural and institutional features of the financial system at the time of the events, with the characteristics of the crisis and its evolution. Bleger and Rosenwurcel (1995), for example, argue that the reforms introduced by the Convertibility Plan in 1991, in spite of being successful in reducing inflation, had other less favorable consequences such as augmenting the vulnerability of the Argentine economy to external shocks. Fernández and Schumacher (1996), on the other hand, admit that the limitations set to the Central Bank's abilities to act as a lender of last resort and to provide liquidity to the system could be seen as a weakness of the implemented reforms. However this general framework was effective in creating enough market discipline and in minimizing the moral hazard fostered by the previous design of the system. The Convertibility Plan regulatory framework constituted, to them, the most efficient way of achieving these ultimate objectives.

2.1. Argentina's Financial System: Pre-crisis period Institutional Characteristics

The Convertibility Plan was introduced in 1991, with the purpose of putting an end to several decades of inflation, fiscal deficits and mismanagement of the economy. Its main objective was to achieve price stability, fixing full convertibility of the domestic currency into American dollars, and setting limitations to the ability of the Central Bank to employ the dangerous instrument of money printing. Due to the failure of the previous fixed exchange rate programs implemented in Argentina, policymakers thought this plan had to be accompanied by a strict legal framework in order to keep monetary authorities from using discretionary powers. Only a regime with these characteristics, it was believed, would enjoy the needed credibility (Kiguel (1995) and Arnaudo (1996)).

The monetary measures established the convertibility of one peso for one dollar, binding the Central Bank to back up the whole monetary base with international reserves⁴. Up to 20% of this back up could be constituted by public securities from the Argentine government, denominated in dollars and valued at market prices.

Apart from this, in 1992 the Central Bank Charter and the Law of Financial Institutions were modified. As a consequence, the Central Bank was banned to conduct active monetary policy. The former deposit insurance system was abolished and new rules of procedure for closure and liquidation of institutions with problems were implemented. Other reforms introduced at the time increased reserve requirements⁵ and minimum required capital to assets ratios, which were established according to the risk undertaken by each financial institution⁶. The high reserve requirements had the objective of creating a liquidity mass which could be released in case of a run. The severe minimum capital

⁴ This exchange rate prevails over the whole period of analysis and until today.

⁵ Reserve requirements could be seen as a tax on the financial system. The structure established a 43% rate on the most inelastic deposits (checking accounts) and a 3% tax rate on term deposits.

⁶ Minimum capital requirements were set at 11.5%.

regulations, apart from constituting an alternative liquidity source, tried to penalize banks according to the risk undertaken.

Between 1991 and 1994, Argentina's financial system was characterized by: a) the lack of a security network or deposits insurance system, which kept the Central Bank from having to bear the consequences of the excessive risk undertaken by the financial institutions; b) high reserve requirements as a prudential regulation in case of liquidity problems arising; c) severe capital regulations; and d) the lack of a lender of last resort given the limitations imposed by the convertibility regime on the Central Bank. In this way, Argentine policymakers had tried to create enough incentives to discipline financial agents. Furthermore, in the event that the market discipline achieved was insufficient, financial institutions would be prepared to face the consequences of the risk undertaken (Fernández and Schumacher 1996). The new monetary and financial regime tried to make bankers aware that the government would not rescue them in case of trouble (Schumacher 1996). We will see how this was put aside once the crisis started, and how the Central Bank took an active role.

The Convertibility Plan was highly effective in stopping hyperinflation. At the same time, a favorable external situation determined a high rate of capital inflow since 1991. During these four years, before the outbreak of the Mexican currency crisis, both peso and dollar deposits grew significantly: total deposits increased 350% between March 1991 and November 1994. The Mexican shock, however, interrupted this process of expansion.

2.2. Evolution of the Crisis

The reversion of capital inflows had a strong impact on Argentina. The confidence crisis translated into an important deposit and international reserves withdrawal, posing a threat to the convertibility commitment and to the banking system, and having a negative impact over investors' credibility. The fall in deposits started affecting only a group of banks, and reaching only peso deposits, before it was generalized to the whole financial system and to deposits in all denominations. The crisis was also evidenced by an increase in country risk which translated into a fall in Argentine bonds' and stock prices. Furthermore, liquidity problems were responsible for an abrupt increase in nominal interest rates.

The Tequila effect had also negative consequences over the level of economic activity: the GDP, which had grown 7,1% during 1994, fell 4,4% in 1995. Unemployment reached 18.6% in April 1995, growing 6 percentage points since October 1994 (Kiguel 1995). Consumption and domestic investment were also affected: while in 1994 gross domestic investment represented 19.9% of GDP, in 1995 this proportion fell to 18.1% (Bleger and Rozenwurcel 1995). In 1995, total consumption, which had grown 6.16% in 1994, went down 5.5%. Exports, on the other hand, were the only component of aggregate demand which increased, from 15.8 billion dollars in 1994, to 21 billion dollars in 1995.

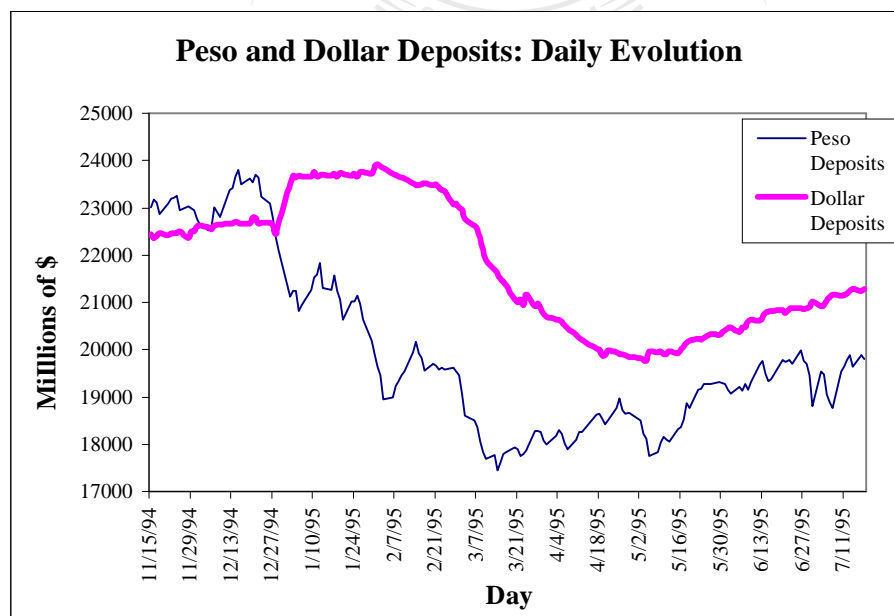
The remains of this section describe in detail the behavior of fundamental financial variables during the four phases in which the study of the evolution of the Tequila crisis in Argentina is often divided.

During the first phase, which started the day the Mexican peso was devaluated, on December 20, 1994, and finished at the end of February 1995, there was an important process of peso deposit withdrawal and a reallocation of deposits among financial institutions. The second phase took place during the month of March. During this second phase, the fall in deposits became a true bank run affecting both peso and dollar deposits, and extending to all groups of financial institutions. At the same time, interest rates reached their highest levels. During the third stage of the crisis, from April until the middle of May, the deposit withdrawal slowed down, until it was reverted on May 14, when the forth and last period of recovery began. On this day President Menem was elected for a second mandate.

Phase 1: Flight to Quality, (December 1994 –February 1995).

During this phase, there was a reallocation of deposits, from pesos to dollars. Total deposits came down during the whole initial phase of the crisis (that is, from December 20 up to February 28, 1995) by 8%. The observed fall in total deposits, which was equal to 3,694 million dollars, can be explained by an important drop in peso deposits, which decreased by 16%. Dollar deposits, on the other hand, grew 1.4% during this period. (Figure I)

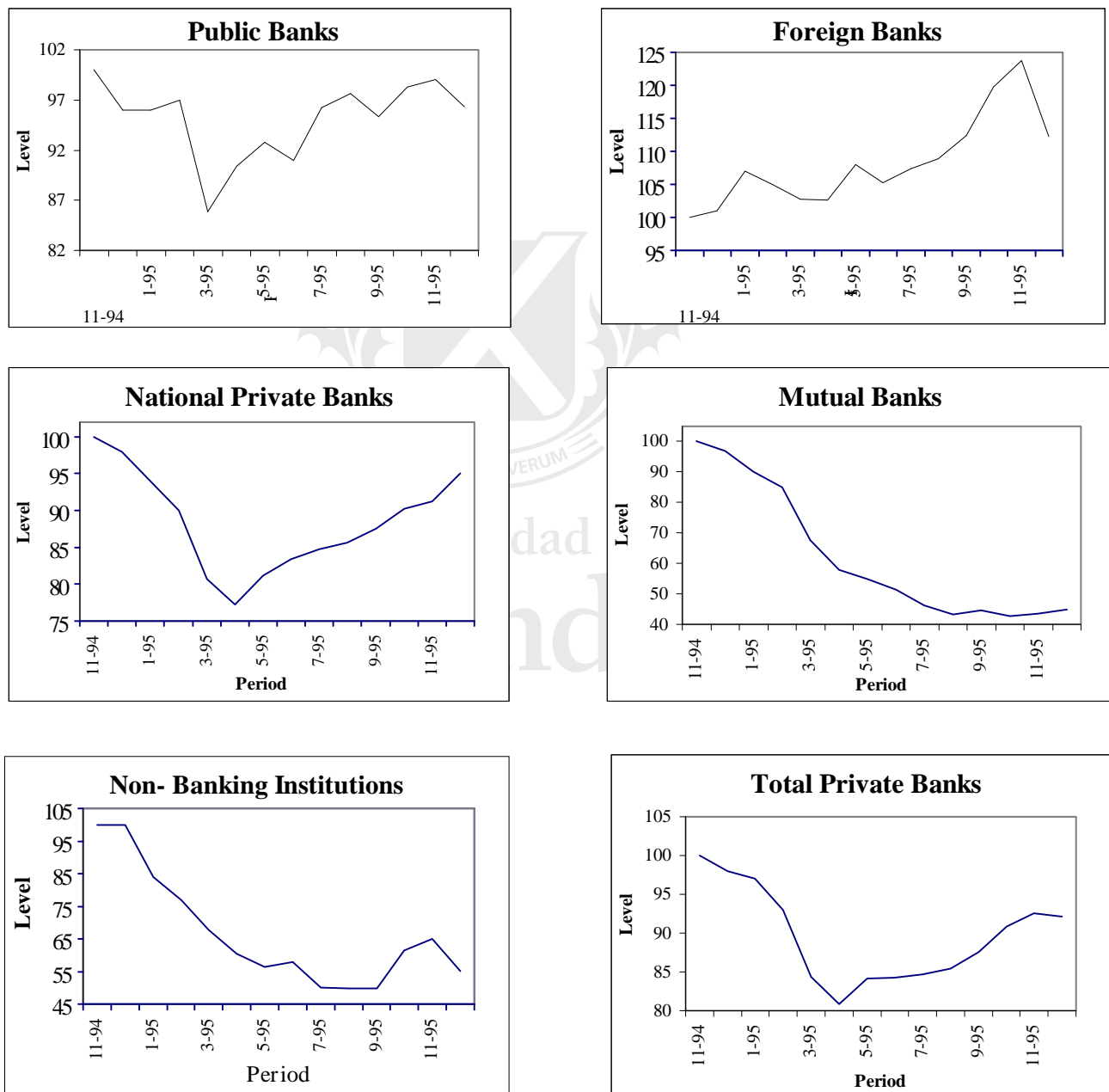
Figure I: Daily Evolution of Peso and Dollar Deposits in the Financial System.



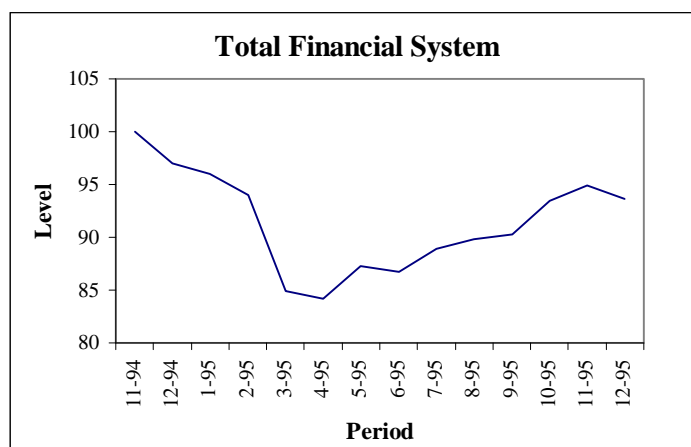
At the same time, a reallocation of funds from the smallest to the biggest institutions, and in particular to foreign banks, was observed. Figure II shows the monthly evolution of deposits for each one of the groups of institutions in the financial system. Foreign banks saw their deposits grow 368 million dollars (almost 5% relative to the level

registered in November 1994), while together, the deposits of national private and public banks, decreased 2,462 million dollars (10% and 3% respectively) during this first period of the crisis. On the other hand, the evolution of the biggest banks' deposits (the ten biggest private banks and the Nación, Provincia, Ciudad and Hipotecario Banks) shows an increase of 1,073 million dollars, or 4.2% (3% and 6% respectively).

Figure II: a) Monthly Evolution of Total Deposits for each group of Financial Institutions. (November 1994 = 100)



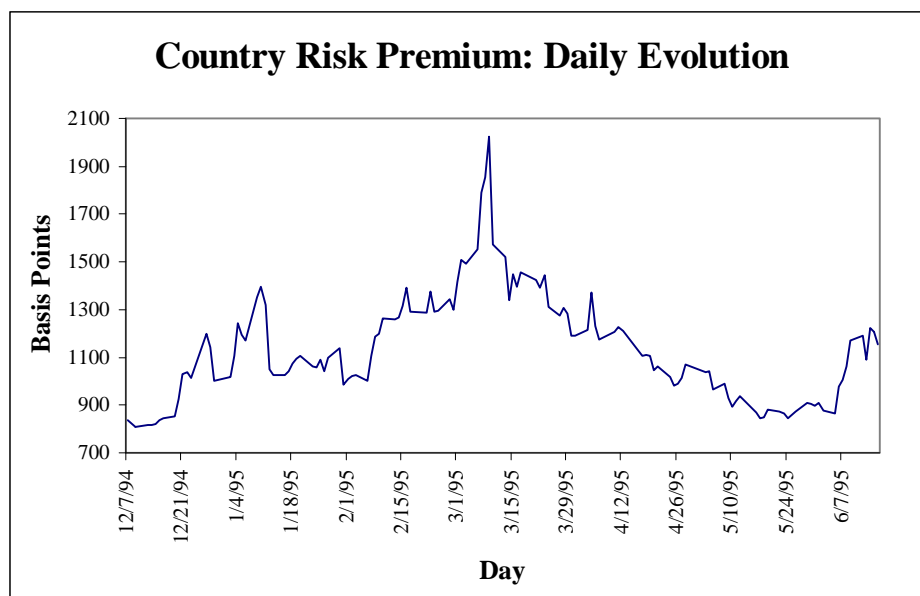
b) Monthly Evolution of Total Deposits in the Financial System (November 1994 = 100)



A subgroup of banks, the wholesale banks, were strongly affected during this period, due to the fall in Argentine public securities' prices caused by the increase in country risk, being this group very active in capital markets (their portfolios were mainly composed by government bonds). The suspension of two wholesale banks, Extrader, on December 28, and Finansur, on January 9, contributed to the increase in uncertainty and to the deepening of the problems which by now had extended to the whole financial system.

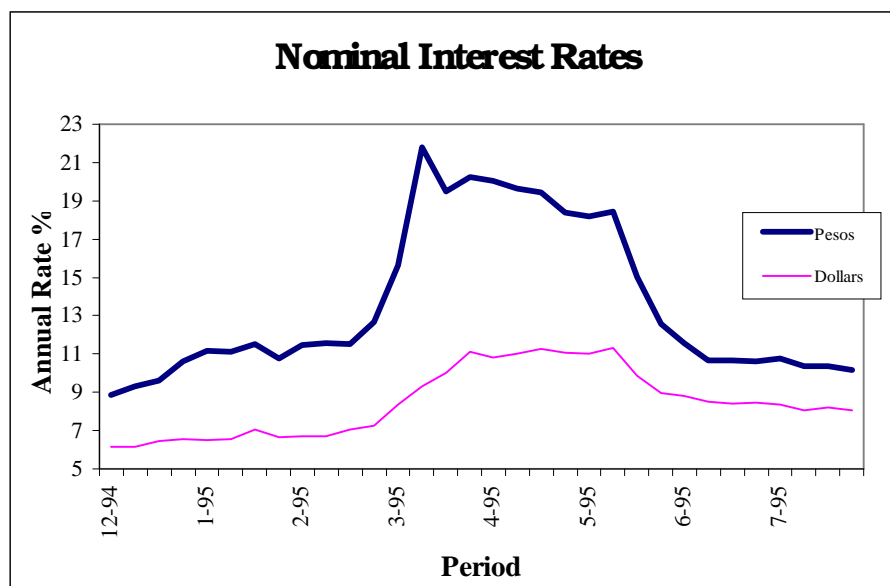
Another indicator of the confidence crisis initiated by the Tequila effect was the great increase observed in country risk premium. A measure of this is constituted by the spread on Argentinean FRB bonds over comparable American Treasury bonds. Figure III shows that this spread grew 103 basis points the day after the Mexican devaluation. In all, throughout this first phase, country risk premium increased 374 basis points: from 925 on December 20 1994 to 1,299 on the last day of February.

Figure III: Daily Evolution of Country Risk. Spread on Argentine FRB Bonds over 30-year American Treasury Bonds.



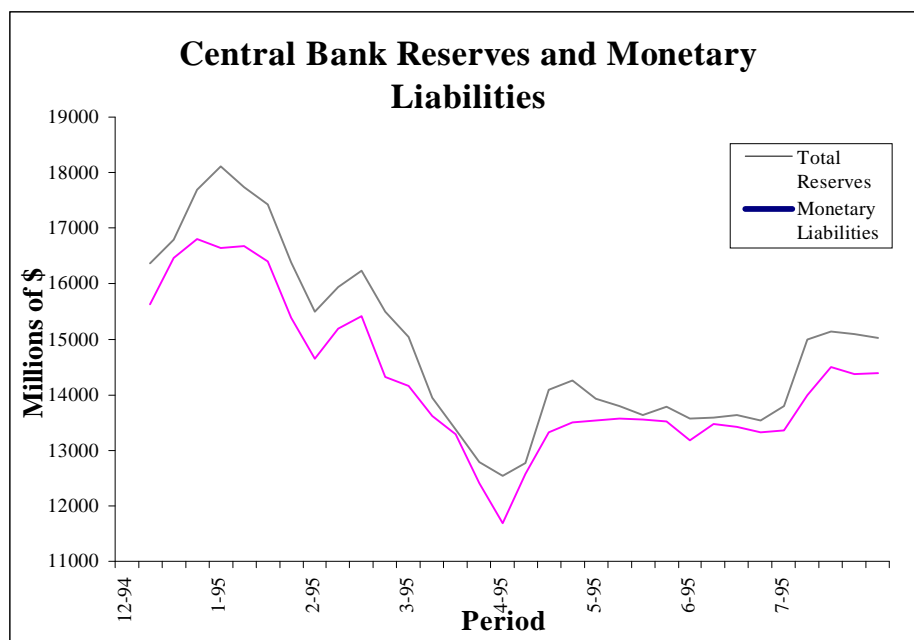
Furthermore, liquidity problems caused by the important deposit withdrawal determined a marked increase in interest rates. Nominal interest rates, both in pesos and in dollars, grew significantly after the Mexican devaluation. The annual interest rate on term peso deposits (30 days), which was equal to 8.7% in November 1994, reached almost 13% at the end of February. The annual rate on this same type of dollar deposits grew from 6% to 7.3% during this phase. An increase in the difference between nominal rates in pesos and dollars was also verified over this period, as shown by Figure IV.

Figure IV: Monthly Evolution of Annual Interest Rates on Peso and Dollar Term Deposits.



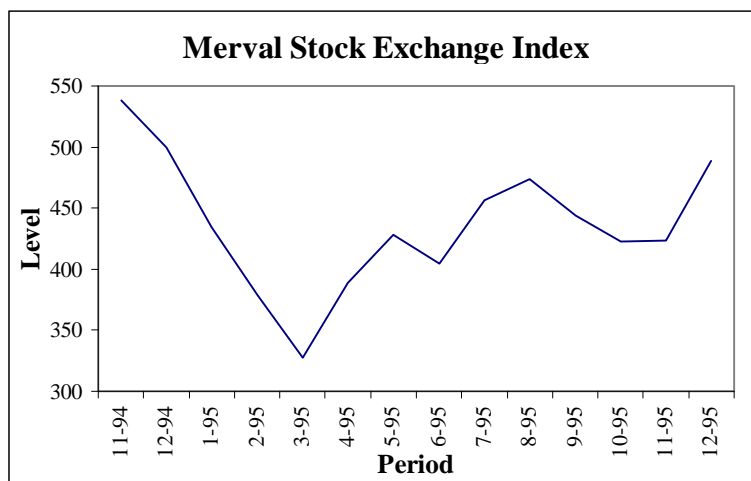
The behavior of deposits also affected the evolution of monetary aggregates and international reserves. M3⁷ decreased from 55,223 million dollars on December 20, 1994 to 51,613 million dollars at the end of February (6.5%), while Central Bank's international reserves fell by 15% during this period (Figure V)

Figure V: Evolution of Convertibility Backup: Central Bank International Reserves and Monetary Liabilities.



The initial effects of the crisis also reached the stock market. A marked fall in the Merval stock index (Buenos Aires Stock Exchange), which decreased from 538 points in November 1994 to 378 (30%) in February 1995 can be seen in Figure VI.

Figure VI: Monthly Evolution of Merval Stock Exchange Index.



⁷ M3 is defined as Currency in Pesos + Total Deposits in Pesos and in Dollars.

Confronting this serious situation, the authorities decided to act.

The first measures taken, however, did not seem to have significant success (Arnaudo 1996). On December 28 reserve requirements on dollar deposits were reduced in order to provide liquidity to the system. By mid January requirements on peso deposits were also lowered and set equal to those on dollar deposits, with the objective of reducing pressures on the banks. At the same time, the dollarization of bank deposits in the Central Bank was resolved⁸.

Due to the restrictions that the reforms described above had imposed on the role of the Central Bank as the lender of last resort, a special security fund integrated by five private institutions and two public banks was constituted with the purpose of assisting those institutions which had suffered higher deposit withdrawal rates. It was managed by Banco Nación and financed with reserve requirements. However, all these measures were received with uncertainty by the markets. The fall in deposits, far from being reversed, was accentuated.

During February total deposits came down by 2.6% (1,142 million dollars) relative to the month before. On February 27, the national government announced a series of fiscal and financial measures. The Central Bank Charter, was also modified, in order to allow for a greater flexibility in the assistance of troubled institutions through the use of repos and rediscounts. The reforms included the extension of the suspension term applied to banks with problems⁹ and the constitution of the Trust Fund for Provincial Development¹⁰. This fund was created with the objective of assisting provincial banks in their process of privatization, by giving them additional credit and helping them with liquidity problems.

These measures taken in February, however, were unable to stop the crisis.

Phase 2: Generalized deposit loss, (March 1995).

The set of measures announced on February 27, far from improving the situation, seems to have given negative signs to the markets, which reacted promptly accelerating the deposit withdrawal. Total deposits decreased only in March more than 4,000 million dollars, which represents a higher drop than that verified over the whole first phase. Furthermore, the decreasing trend extended to dollar deposits. During March, the fall in dollar deposits was higher than the drop in peso deposits: they decreased by 10% and 8%

⁸ Central Bank Communication "A" 2293 (December 28, 1994) established the reduction of reserve requirements on dollar deposits, setting them at 35% for checking accounts and 1% for term deposits. Communication "A" 2298 (January 12, 1995) resolved the lowering of reserve requirements on peso deposits and the dollarization of bank deposits in the Central Bank.

⁹ Modifications also intended to facilitate the transfer of assets between those institutions which were more severely affected by deposit withdrawals and those which were not as harmed by the effects of the run. Constraints on rediscount use were relieved, and the Central Bank was allowed to grant rediscounts exceeding the net worth of the assisted institutions.

These reforms were introduced by Decree 290/95 of February 27, 1995.

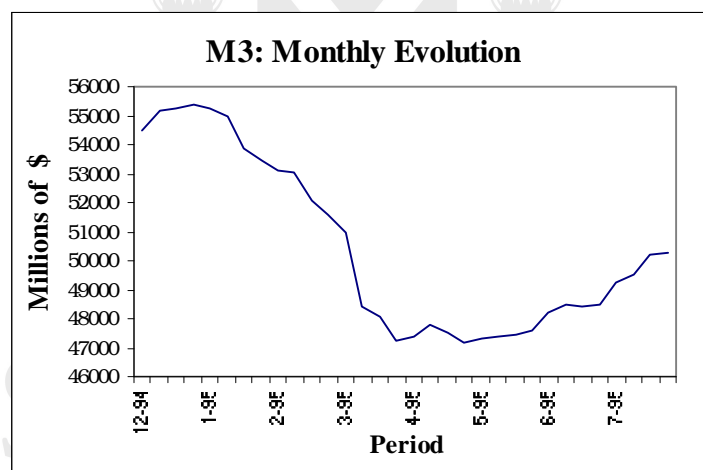
¹⁰ The Trust Fund for Provincial Development was created by Decree 286/95 of February 27, 1995.

respectively. Furthermore, all groups of financial institutions suffered deposit losses during this second phase.

The deepening of the financial crisis and of the liquidity problems caused by the important deposit loss was reflected not only in interest rates but also in monetary aggregates. Nominal interest rates on both peso and dollar term deposits, reached their highest levels in March: peso annual interest rates reached 21% on the second week of March, while dollar annual interest rates grew to 11%. Both rates increased 70% and 54% respectively in relation to their values from the previous phase. Country risk also worsened significantly during this month, reaching 2,023 basis points on March 9.

M3 fell 4,378 million dollars (8.5%) (Figure VII), while the Central Bank lost 2,508 million dollars in international reserves (16%). The Merval stock index also suffered its deepest fall in March: it decreased 51 points, 13% relative to its value of February, reaching a minimum of 328 points.

Figure VII: Monthly Evolution of M3.



When, in mid-March, the reserves which had been left aside to support the system had been depleted, the Central Bank was compelled to launch a new program to obtain foreign financing. On March 15, an agreement with the IMF was announced. This included the renewal and extension of the Extended Facilities Program, which would generate 2.4 billion dollars. Loans from the World Bank and the IBD were also arranged for the value of 2.6 billions dollars. At the same time, the subscription of a new 2 billion dollars public bond was decided. These funds would used to increase international reserves and to the constitution of the trust funds. As will be seen, these measures were important for the resolution of the bank run in Argentina, although their effects were not immediate.

Other significant measures were the constitution, at the end of March, of another fund, the Trust Fund for Bank Capitalization and the establishment of a deposit insurance

network¹¹. The Trust Fund for Bank Capitalization tried to aid those banks with liquidity problems, and to assist them in their process of merger with those institutions which had emerged from the crisis in a better shape. It was financed with a transference from the National Treasury and part of the funds provided by the World Bank. Among its functions were the subscription and integration of capital, the purchase and sale of stock from troubled institutions, and the granting of loans and credits.

The new limited deposit insurance system granted investors a guarantee over part of their funds. Financial institutions were obliged to contribute monthly with a proportion of the daily balances of their total deposits, in addition to a another contribution established according to the risk undertaken by the bank¹². The insurance covered up to 10,000 dollars for each person who holds money in a checking account, savings account, and time deposits up to 90 days, and up to 20,000 dollars for deposits of terms longer than 90 days¹³. However, it did not cover deposits paying interest rates higher than two percentage points of a deposit rate calculated by the Central Bank.

Phase 3: Slowing down of the Run (April 1– May 14).

The measures adopted in March, more effective than those implemented in the first phase, contributed to slow down the bank run (BCRA 1995). The announcement of the agreed external aid had important consequences over investors' expectations. During the third stage deposit withdrawal slowed down significantly, and the dollarization process was reversed. Although dollar deposits went on falling, a slight improvement in peso deposits, which increased 600 million dollars, was verified during this phase. Total deposits fell 1.2%, while dollar deposits came down by 3.7%.

During this third phase, the nominal interest rate on peso term deposits dropped by 1.6%, although the interest rate on dollar deposits continued its ascend until May 15. This interest rate reached 11% annual on the second week of May. Country risk also improved in 305 basis points (going from 1190 on March 31 to 885 on May 15). On the other hand, M3 remained almost constant relative to the level reached during the previous phase. Central Bank reserves, however, grew 878 million dollars (7%).

¹¹ The Trust Fund for Bank Capitalization was created by Decree 445/95 of March 28, 1995. The establishment of the deposit insurance system was disposed by Law 24.485, which was passed on April 12, 1995, and which also created an Oversight Committee for the Trust Fund for Provincial Development (Decree 286/95), and for the Trust Fund for Bank Capitalization.

¹² This was intended to avoid the moral hazard of financial institutions, that is, to keep banks from undertaking higher risk due to the existence of a Central Bank guarantee for their deposits. It was with the objective of reducing this probability that the contribution of each financial institution was established in direct relation to its level of risk. On the other hand, the fact that the insurance did not guarantee those deposits receiving high rates attempted to alleviate another type of moral hazard: that exercised by depositors who, when aware of the existence of a deposit insurance system guaranteeing their funds, loose incentives to behave with discipline.

¹³ The deposit insurance was managed by a private institution (SEDESA), whose Board was integrated with the Ministry of Economy, and representatives from the Central Bank and the commercial banks. Financial institutions were supposed to face the cost of the funds. Each bank had to contribute with 0.03% and 0.06% of its deposits, according to the risk undertaken.

Phase 4: Crisis Resolution, (from May 14, 1995).

In spite of the measures taken, political uncertainty predominating at this time determined that only after the presidential re-election the return of deposit began. The outcome of the elections held on May 14, where President Menem won a second mandate, contributed reinforcing policy commitments and restoring investors' credibility.

May 15 is generally considered as the date the bank run ended. On this date a turning point in total deposit levels was observed. During the second fortnight of March, total deposits increased by 4%. Between May and December 1995 both peso and dollar deposits continued returning to the financial system: by June 15 peso and dollar deposits had increased 6.4% and 4.4% respectively relative to their previous levels (May 14).

Table I: Percentage Change in Deposits (%).

| Period | Peso Deposits | Dollar Deposits | Total Deposits |
|----------------------------|---------------|-----------------|----------------|
| 12/20 – 2/28 | -17.2 | 1.8 | -7.8 |
| 3/1 – 3/31 | -7.9 | -10.4 | -9.0 |
| 4/1 – 5/14 | 1.75 | -3.7 | -1.1 |
| 5/15 – 6/15 | 5.5 | 4.3 | 5.1 |
| Total Fall 12/20 – 5/14 | -22.4 | -10.4 | -17.5 |

Table II: Absolute Change in Deposits (in Millions of Pesos).

| Period | Peso Deposits | Dollar Deposits | Total Deposits |
|----------------------------|---------------|-----------------|----------------|
| 12/20 – 2/28 | -4,066 | 430 | -3,637 |
| 3/1 – 3/31 | -1,548 | -2,399 | -3,946 |
| 4/1 – 5/14 | 316 | -769 | -457 |
| 5/15 – 6/15 | 1,016 | 868 | 1,954 |
| Total Fall 12/20 – 5/14 | -5,298 | -2,738 | -8,040 |

Annual interest rates paid on peso deposits continued falling, while annual dollar rates started going down after May 15. M3 and International Reserves also increased significantly while capital markets evolved favorably during this period. Both bonds and stock prices increased. The Merval index reached 428 points in May, growing 30% relative to its value in March. This evolution was influenced by the positive effects the presidential elections had on political uncertainty.

According to Central Bank estimations, more than 70% of the deposit fall was financed with liquidity instruments available to the monetary authorities, such as liquidity rediscounts, repos, and reserve requirements reductions. The remaining 30% was covered with external credit lines and with private credit cuts (Kiguel 1995 and Schumacher 1996).

Table III shows exactly how the total deposit fall registered between December 1994 and May 1995, was financed. Evidently, the commitment of not intervening was abandoned. Although the monetary and financial regime constrained the assistance of banks, due to the panic, there was massive intervention.

The Central Bank relied heavily on reserve requirements reductions, which generated about 3,4 billion dollars. Other sources of liquidity were loans to banks for 1,537 million dollars and repos for 820 million dollars (Table III).

Table III: Financing of Total Deposit Withdrawal. Millions of Pesos.

| | Change in Total Deposits | Change in Private Credit | Central Bank Creation of New Liquidity | | | | | Creation of Liquidity / Change in Deposits | Change in Private Credit / Change in Deposits | Other Source/ Change in Deposits |
|----------------------------|--------------------------|--------------------------|--|----------------|--------------------------------|--------------|---------------|--|---|----------------------------------|
| | | | Repos | Loans to Banks | Reserve Requirements Reduction | Total | Other Sources | | | |
| 12/20/94 to 2/28/95 | -3,637 | 304 | 369 | 256 | 2,400 | 3,025 | 916 | 83.17% | -8.35% | 25.18% |
| 3/1/95 to 3/31/95 | -3,946 | -1,424 | 436 | 842 | 1,000 | 2,278 | 244 | 57.72% | 36.08% | 6.20% |
| 4/1/95 to 5/14/95 | -457 | 9 | 15 | 439 | 0 | 454 | 12 | 99.34% | -1.96% | 2.62% |
| 12/20/94 to 5/14/95 | -8,040 | -1,111 | 820 | 1,537 | 3,400 | 5,757 | 1,172 | 71.60% | 13.81% | 14.59% |

Source: Schumacher (1996) and Kiguel (1995).

Table III shows an important Central Bank intervention. Not only the current liquidity instruments were used, as Central Bank authorities argue, (Kiguel 1995), but also, the rules were changed in order to increase their ability to intervene.

An example of this is the re-implementation of the deposit insurance system. Arnaudo (1996) argues about the difficulties in combining a state guarantee of this type with a convertibility regime, mainly because of the fiscal constraints imposed on the Central Bank. Even though in theory the security network had been designed so as to minimize the extent to which fiscal resources were jeopardized, empirical evidence suggests that the monetary authorities were involved in the bail out of a number of troubled financial institutions.

The agreed external aid was essential to restore the system's credibility and to help financial institutions overcome their difficulties. Ganapolsky and Schmukler (1998) argue that this was one of the most significant measures received by financial markets. Its announcement had a positive impact on country risk, leading to an increase in Brady bonds prices and in the stock market index. However, empirical evidence has shown that this measure also contributed raising short term interest rates. According to the authors, this suggests that although financial markets perceived the agreement with the IMF as positive in the long run, it was also believed to constrain credit opportunities in the short run. On the other hand, these negotiations not only implied an additional source of financing but also provided support to the way the panic was being handled by Argentine authorities.

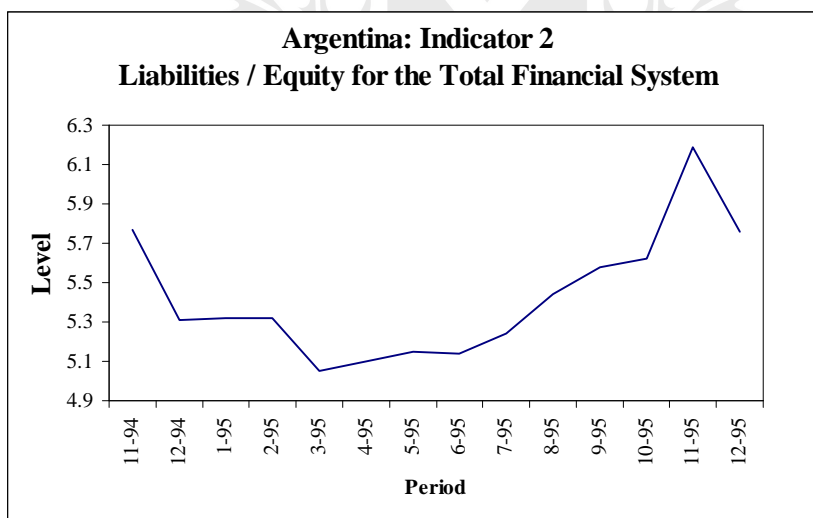
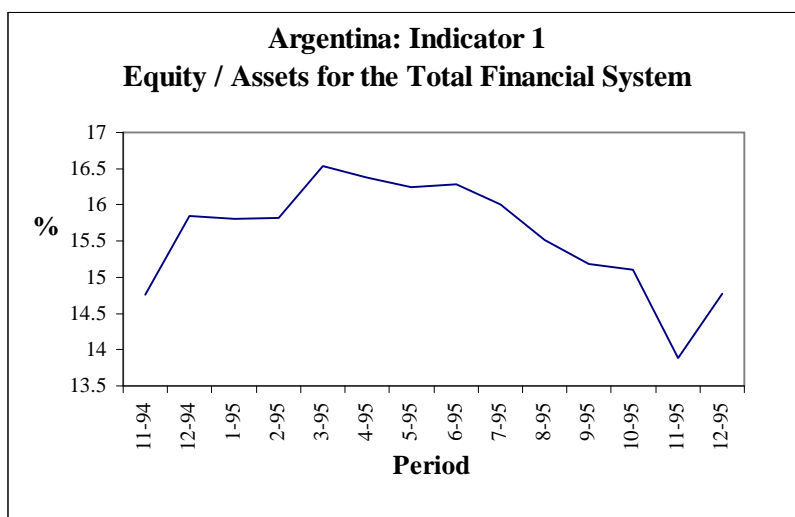
2.4. Consequences of the Crisis on the Financial System

The evolution of financial system indicators shows the negative effects of the crisis. The indicators analyzed include the main variables considered by the CAMEL system (Capitalization, Assets, Management, Earnings, Liquidity). Indicators 1 and 2 (Equity over Assets, and Liabilities over Equity) are capitalization indicators; indicator 3 (Immediate Liquidity, defined as Cash plus Public Securities over Liabilities) constitutes a measure of the institution liquidity position; indicator 4, (Operating Expenses over Liabilities) tries to measure banks management efficiency; indicator 6 (Non-performing loans net of Provisions over Equity), shows assets quality and provides a measure of the credit risk undertaken by financial institutions. Finally, indicator 6, ROE, shows the financial system returns over its equity.

While the value of total assets decreased by 7.2% between November 1994 and April 1995, total liabilities dropped by 6,939 million dollars (9%). Thus, the value of the financial system equity increased by 393 million dollars (3%). Apart from a reduction in its total value, liabilities suffered a change in its composition. By November 1994, before the crisis, deposits represented 63% of total liabilities, while by April 1995, this participation had fallen to 57%. Instead, an increase in Central Bank and foreign credits can be observed.

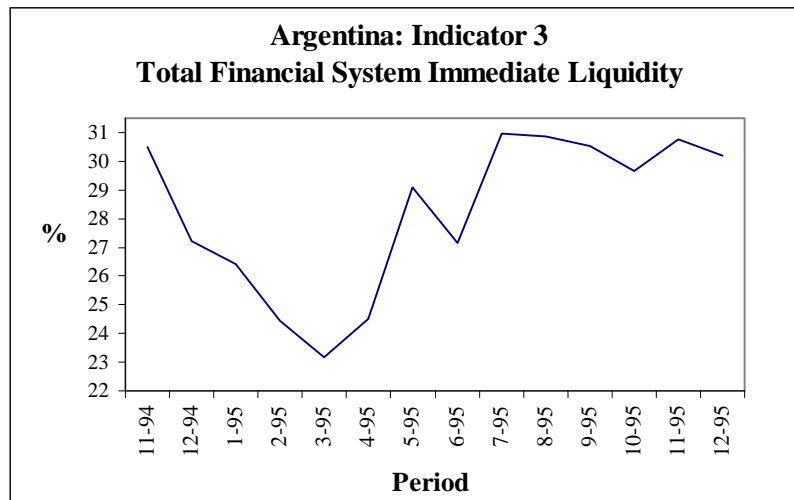
The drastic reduction in total deposit explains the behavior of capitalization indicators. Indicator 1 (Equity/Assets) grew from 14.8% in November 1994 to 16.5% in May 1995. It can thus be seen that capital integration was above the required levels (11.5%) even before the crisis had begun. The leverage indicator (Indicator 2, defined as Liabilities/Equity in times of Equity) also fell during this period, reaching a minimum level of 5 times in March, and reflecting the important deposit withdrawal.

Figure VIII: Evolution of Indicators 1 and 2.



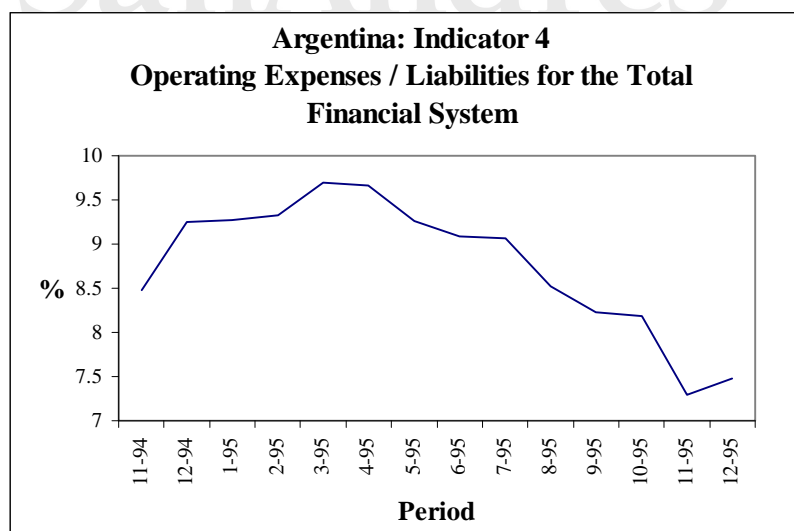
Indicator 3 shows a prompt impact of the crisis over the financial institutions liquidity position. The immediate liquidity indicator fell by more than 7 percentage points between December 1994 and March 1995. After March, however, it started improving.

Figure IX: Evolution of Indicator 3.



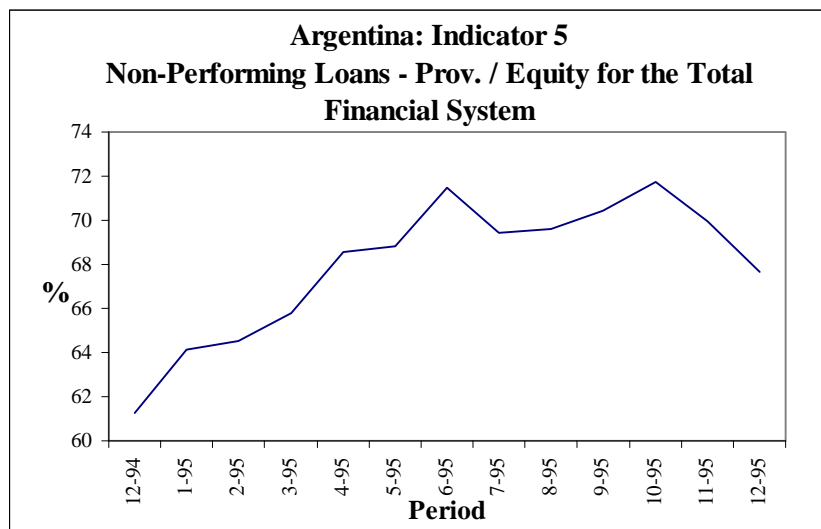
The evolution of indicator 4 (Operating Expenses /Liabilities) shows that the system also suffered in terms of efficiency due to the bank run. Indicator 4 grew from 8.5% in November 1994 until it reached its maximum value of 9.7% in March 1995.

Figure X: Evolution of Indicator 4.



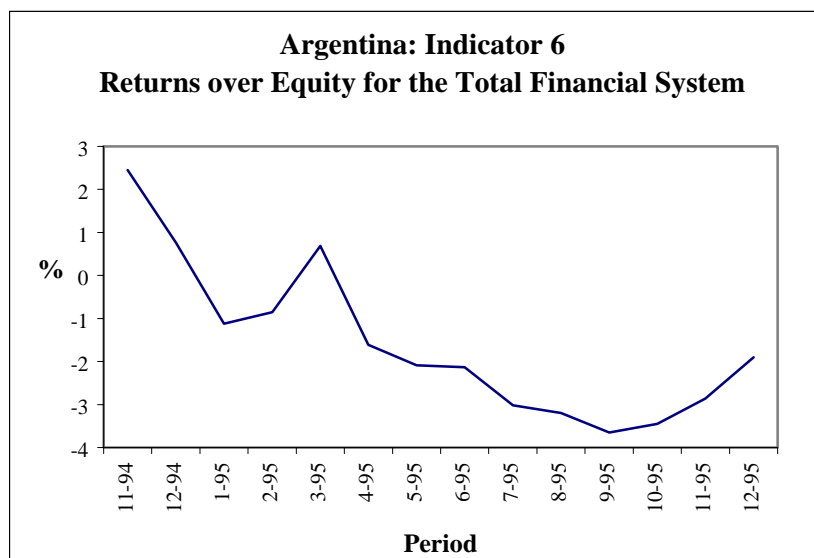
The damage on the quality of the financial system's portfolio of loans was another negative consequence of the Tequila crisis, as can be seen by the evolution of indicator 5, which increased from 51.2% to 71% between November 1994 and July 1995.

Figure XI: Evolution of Indicator 5.



Financial institutions returns were severely harmed by the Tequila effect. In January 1995 the ROE indicator took a negative value (-1.12%), and although a slight improvement can be observed in March (0.7%), returns deterioration continued after April.

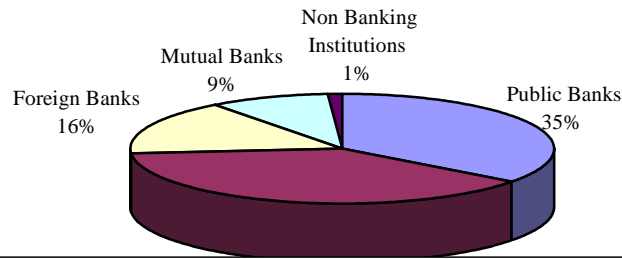
Figure XII: Evolution of Indicator 6.



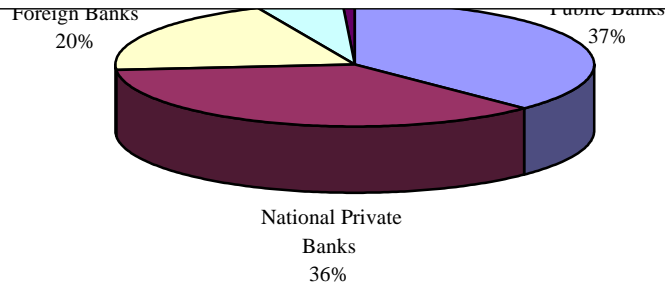
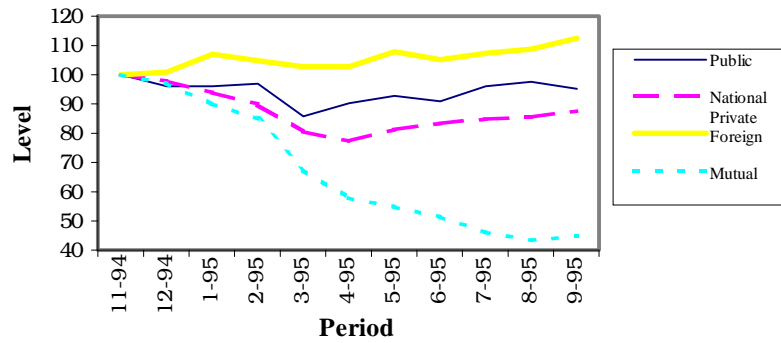
almost complete
system's vulnerability
put in evidence
regime to reach

ing the
in crisis
monetary

Total Deposits Distribution November 1994



Evolution of Total Deposits by Bank Type



Universidad de
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