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Management and Resolution of Banking Crises

*Lessons from the Republic of Korea
and Mexico*



Jose De Luna-Martinez

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and Mexico*

Jose De Luna-Martinez

*The World Bank
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FOREWORD

The resolution of a systemic banking crisis is not an event, but a long and complex process. It requires rapid policy responses to limit systemic risks, willingness to close or restructure non-viable intermediaries, adequate mechanisms for debt restructuring, rapid disposition of non-performing assets, and comprehensive strategies to restore the long term solvency and profitability of a banking system. Furthermore, the resolution of a crisis usually requires major changes in the financial as well business practices of a country. In fact, in order to eliminate the structural causes of a banking crisis, major efforts may be needed to redefine the government's role in the economy, improve disclosure and corporate governance at firms and financial intermediaries, lift limits on foreign ownership of financial institutions, strengthen competition rules and market discipline, improve a country's judicial practices, and strengthen law enforcement.

The management and resolution of a banking crisis constitute a major challenge for any government. Strong economic and political interests may impede required reforms. Lack of institutional capacity may affect the ability of a government to rapidly recognize losses and choose the adequate policies to resolve a crisis. Moreover, inappropriate sequencing of policies or delay to implement them may produce poor results. Given the large magnitude of banking crises, the manner in which a crisis is managed and resolved can have serious implications in terms of fiscal costs, income distribution, and pace of macroeconomic recovery.

This paper analyzes the strategies and policies implemented in the Republic of Korea and Mexico to resolve their banking crises. It also compares the social, political and institutional constraints faced by decision makers in each country. Based on the experiences of Korea and Mexico, the paper stimulates the discussion on what to do (or not do) to rapidly and successfully resolve a systemic crisis. It also draws and discusses 10 useful lessons for policy makers around the world responsible for managing and resolving a banking crisis.

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ABSTRACT

This paper analyzes and compares the strategies and policies implemented in Korea and Mexico to manage and resolve their banking crises. It identifies eight stages for resolving a banking crisis and examines the responses of Korea and Mexico in each of them: (i) containing systemic risks, (ii) establishment of an overall crisis resolution unit, (iii) recognition of losses, (iv) reduction of bad assets, (v) recapitalization of banks, (vi) restructuring of corporate/household debt, (vii) strengthening of prudential regulation and supervision, and (viii) management and disposition of impaired assets. In addition, the paper compares the management of both crises in terms of transparency of decision making, speed and sequencing of reforms, and social and political obstacles faced for crisis resolution. The paper stresses four points: Firstly, there is no single approach for managing systemic banking crises. What works in one country does not necessarily work in others. Secondly, to a large extent, the resolution of a banking crisis is a managerial problem. The resolution of a crisis will depend on the ability of a government to deliver rapid and sequenced responses, remove legal and administrative obstacles, create consensus around a strategy, implement unpopular measures, coordinate involved agencies, and resist opposition from affected interest groups. Thirdly, a key factor for resolving a crisis is the realistic recognition of banks' losses at the early stages of a crisis. Unrealistic recognition of problems will likely lead to the prescription of insufficient or ineffective measures, which may provide some relief in the short-term, but fail to address the underlying causes of a crisis. Finally, an overall strategy that links all policies and programs towards the accomplishment of a coherent set of goals is crucial for the successful resolution of a banking crisis. Failure to implement policies in a coherent and sequenced basis may produce poor or even contradictory results.

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INTRODUCTION

During the last five years, the number of studies on banking crises has rapidly increased. Most of these new studies have focused on analyzing the origins of banking crises and developing models to predict and prevent them. However, little attention has been paid up to now to the question of how to manage and effectively resolve a banking crisis.

What can be done to rapidly and effectively contain systemic risks, restore the solvency and profitability of financial institutions, minimize the impact of financial sector distress on the economy and limit the fiscal costs of a crisis? What set of policies contribute to a rapid and successful resolution of a banking crisis and under what conditions? Can a model of bank restructuring that proved to be successful in one country be easily implemented in others?

Certainly, the management and resolution of a banking crisis is not an event, but a long and complicated process. Given the large magnitude of most crises, their rapid and successful resolution depends upon a wide range of financial, economic, managerial, political and social factors. The rapid resolution of a crisis can be determined by the prompt identification and resolution of insolvent banks, the amount of resources committed by the government and/or private investors to recapitalize viable financial institutions, the rapid disposition of non-performing assets, and the speed of macroeconomic recovery of a country, especially if debtors' capability to repay their loans needs to be restored. Furthermore, the success to resolve a crisis will also depend on the institutional capacity of the government to manage it, the sequence and timing of reforms, the willingness to reform and implement painful and unpopular measures, and the social and political constraints faced by decision makers.

This paper analyzes and compares the causes of the banking crises in Korea and Mexico, as well as the policies and tools utilized for managing and resolving them. The banking crises of Korea and Mexico pose important similarities. Both crises were triggered by sudden currency devaluations. Also both crises simultaneously unfolded with a major downturn of their economies, followed by a process of rapid macroeconomic recovery. In addition, in both countries neither the emergence nor the magnitude of the crises were predicted by anyone. In fact, just some months before the beginning of the crises, both countries were coincidentally admitted as members of the OECD reflecting the overall optimism of the markets and international community on the sound economic fundamentals of Korea and Mexico.

However, what makes Korean and Mexican banking crises two interesting cases are not only their similarities, but also their differences in crisis management and resolution. There are at least four major differences in the resolution of both banking crises.

Firstly, Mexico has relied on a market-based approach to recapitalize the banking system. The government has established incentives to encourage banks' shareholders to recapitalize their institutions and/or to attract new capital from new domestic and foreign investors. In Korea, on the contrary, the main instrument for bank recapitalization has been the injection of government resources. Under this scheme, major Korean banks have been practically nationalized, and the government has become the owner of more than 75% of the banking system's equity capital.

Another major difference lies on the use and recipients of government financial support. In Mexico, both banking institutions and debtors have benefited from direct fiscal support. Public money has been used to acquire non-performing loans (NPLs) from banking institutions as well as to assume a large part of the costs of the programs for restructuring domestic debt of both households and enterprises, through interest rate reductions, extension of loan maturities and debt forgiveness. In Korea, the use of public resources has been exclusively limited to inject capital into banks and buy NPLs from ailing financial institutions.

A third major difference lies on the speed of reforms. In many of the steps required for crisis resolution such as resolution of distressed banks, purchases of NPLs, adoption of international standards on prudential regulation, deposit insurance reform, and sale of impaired assets, Korea has undoubtedly made progress more rapidly than Mexico.

Finally, the other major difference lies in the social and political constraints faced by decision makers. In Korea, opposition to the bank restructuring program has been relatively weak. Other than labor union opposition to drastic staff cuts, the government has been able to implement its bank restructuring plan without major social or political constraints. In Mexico, on the contrary, resistance to the government's plan for bank restructuring has been steady and widespread among the Mexican population. Indeed, banks' borrowers have been able to organize themselves to force the government to reallocate part of the fiscal resources to support debt restructuring. Also, debtors have been able to impede necessary reforms in the bankruptcy law which would have made easier for banks to collect loans and for the government to rapidly sell the acquired impaired assets. Furthermore, large parts of the Mexican society have opposed to convert the fiscal resources already used by the government to acquire non-performing loans from impaired institutions into public debt.

This paper will identify and explain the main differences in crisis management and resolution used in both countries. A simple scheme of banking resolution process is used to compare the approaches and tools implemented in each case. The scheme identifies eight stages for resolving a banking crisis:

- containing systemic risks
- establishment of an overall crisis resolution unit
- recognition of losses
- reduction of bad assets (purchase of NPLs)
- recapitalization of banks
- corporate/household debt restructuring;
- strengthening of prudential regulation and supervision
- management and disposition of impaired assets

Progress of Korea and Mexico in each of these stages of banking crisis resolution will be analyzed and compared. In addition, the management of both banking crises will be assessed in terms of transparency of decision making, speed and sequencing of reforms, and social and political obstacles faced for banking crisis resolution.

The paper is organized in three parts. Part 1 will briefly compare the causes of the banking crises in both countries. The second part will analyze and compare the approach and main policies implemented in Korea and Mexico to manage and resolve their crises. The last part will discuss the main findings and will draw some lessons from both cases.

1. CAUSES OF THE BANKING CRISES OF KOREA AND MEXICO

It would have been quite difficult to predict the magnitude, or even the breakout, of the banking crises that started in Korea and Mexico in November, 1997 and December 1994, respectively. During the months before the crises, both banking systems seemed to be sound, reporting capital adequacy ratios above the minimum 8% (see Table 2). Furthermore, both countries were growing at positive annual rates, and reports from international investment banks and rating agencies expressed an optimistic view on the health of both banking sectors.¹

In addition, both governments had just completed the implementation of a comprehensive program to reform their financial sectors. Those programs aimed at increasing the efficiency of the banking sector by reducing government interference, deregulating financial markets, easing the restrictions to foreign banks, liberalizing their capital accounts and also, in the case of Mexico, privatizing all commercial banks.

Table 1 illustrates the main elements of the programs of financial sector reform implemented in Mexico and Korea during the years before the crises.

Table 1
Financial Sector Reform in the Republic of Korea and Mexico

	Before Reforms		After Reforms	
	Mexico (1988)	Korea (1992)	Mexico (1994)	Korea (1997)
Ownership of commercial banks	Government	Private sector	Private sector	Private sector
Decisions on the appointment and removal of bank managers	Government	Government	Banks	Banks
Credit ceilings on commercial banks (central bank controls on domestic credit)	Yes	Yes	No	Almost not
Foreign ownership of commercial banks	Prohibited	Partially allowed	Partially allowed	Partially allowed
Determination of lending and deposits rates	Government	Government	Market	Market (in almost all cases)
Borrowing in foreign currency by commercial banks	Highly Restricted	Highly Restricted	Allowed	Allowed
"Policy" loans (government interference in lending decisions)	Yes	Yes	No	Significantly reduced
Main recipients of bank loans	Public sector	Private sector	Private sector	Private sector

Source: Aspe (1994), Balino (1999) and Cho (1999)

As shown in the above table, Mexico and Korea achieved rapid and remarkable results to modernize their banking systems during the 90's. In Mexico, all commercial banks were privatized and restrictions on foreign ownership of financial institutions were reduced from 100% in 1989 to 70% in 1993. In addition, in both countries all forms of direct and indirect government intervention in the banking system were significantly reduced. Lending and deposit

rates were no longer determined by the government, but by market forces. Also, government interference in banks' lending decisions was significantly reduced in the case of Korea and completely eliminated in the case of Mexico.

Some Symptoms of the Banking Crises

However, as shown in the following table, once the reforms in the Korean and Mexican financial systems were concluded, some typical symptoms of a banking crisis started to arise: lending booms, deterioration of banks' lending portfolios, decreasing levels of capitalization, insufficient loan loss provisions, increasing short-term foreign liabilities and, in the case of Korea, huge leverage of the corporate sector.

Table 2
Selected Indicators of the Banking Systems in Korea and Mexico

Indicators	Mexico (1992)	Mexico (1993)	Mexico (1994)	Korea (1995)	Korea (1996)	Korea (1997)
Number of domestic institutions	18	20	24	26	26	26
Total assets in US dollars	144.3 billion	178.9 billion	236.6 billion	552 billion	658.2 billion	712.9 billion
Total assets as % of GDP	40	44.3	56	157	170	169
Assets of banks as % of total assets of the financial system	78	81	79	52	49	51
Total loan portfolio in US dollars	97.6 billion	122.9 billion	155.2 billion	311 billion	389 billion	385 billion
Growth of the lending portfolio over the previous years	18%	25.9%	26.2%	19%	25%	-1.1%
Non-performing loans as % of total loan portfolio	5.2	6.9	9.0	5.2	3.9	5.8
Provisions for loan losses as % of total loans	2.6	3.1	3.8	1.4	1.4	1.9
Capital adequacy ratio	9.03	10.11	8.0	9.3	9.1	7.0
Return on assets (ROA)	1.53%	1.61%	0.58%	0.32%	0.26%	0.93%
Return on equity (ROE)	42.2%	40.12%	13.2%	4.19%	3.8%	-18%

Note: Assets of commercial banks in Korea include both banking accounts and trust accounts.

Source: CNBV, FSS, BOK and BANXICO

Lending Booms

As shown in the above table, banks in Korea and Mexico reacted to the deregulation and liberalization of their financial sectors by rapidly increasing their lending portfolios. In Mexico, during the three year period 1991-1994, aggregate gross loans increased by 89.2% in real terms, equivalent to an annual real growth rate of 23.7%. This is equivalent to at least eight times the rate of growth of real GDP during the same period.

In Korea, bank credit grew rapidly too. From the end of 1994 to December 1996, it increased by 34%. Surprisingly, bank credit did not grow during the year of the crisis. This is due to the fact that in 1997 the government issued stricter limits on connected lending and credit risk exposure that prevented banks from increasing their loans to the domestic big corporations (chaebols) whose leverage already exceeded any reasonable ratio. However, the lack of new bank credit did not prevent chaebols from increasing their leverage; in fact chaebols started to increase their financing from the so called non-bank financial institutions (NBFIs) including merchant banks, development banks, insurance companies, investment trust companies, credit unions, which together are bigger than commercial banks in terms of assets (see Table 2). Moreover, the impact

of the new ceiling on credit exposure was limited because banks continued to be exposed to the chaebols through other channels. In 1997, for instance, 90% of the bonds issued by the chaebols were guaranteed by the domestic commercial banks.

Huge Debt of Domestic Corporations

In Korea, reforms to reduce all forms of government interference in lending decisions did not alter the traditional role played by the banking sector in financing the aggressive expansion plans of chaebols. The aggressive, leveraged expansion of chaebols worked well as long as the economy and exports expanded vigorously and the returns on new investment exceeded the cost of capital. However, in the years before the crisis, chaebols' main financial performance indicators such as free cash flow, return on equity, profit margin, debt coverage ratio rapidly deteriorated while their debt/equity ratios continued to rise beyond reasonable limits (see Claessens, 1998). At the end of 1997, for the big 5 chaebols, whose debt account for 50 per cent of total corporate debt, their debt was on average more than five times their equity. The level of corporate debt in Korea was estimated \$500 billion in 1997, or more than 150 percent of GDP. About 50% of it was financed by domestic commercial banks, making them extremely vulnerable to the chaebols.

In comparison to Korea, Mexican large conglomerates were much less leveraged. The debt to equity ratio of the largest 500 conglomerates was less than 83% (Gavito, p. 11). In addition, total loan portfolio of Mexican commercial banks represented only 56% of GDP at the end of 1994, while in Korea it represented 156% of GDP at the end of 1997.

Increasing Short-Term Foreign Liabilities

To a large extent, the rapid increase of banks' loan portfolio in Korea and Mexico was made possible by the increasing availability of foreign funds, resulting from their capital account liberalization carried out in the years before the crises. Both Korea and Mexico met the increasing demand for finance by using foreign borrowing, often at short term maturities. However, given the weak prudential regulation and lack of risk management capacity within the banks, large maturity mismatches in banks' balance sheets appeared. At the end of December, 1997 short term assets of Korean commercial banks covered only 55 percent of short term liabilities (Baliño, 1999). A similar problem occurred in Mexico where short term assets of banks covered only 65% of short-term liabilities at the end of 1994.

Increasing Non-Performing Loans and Decreasing Capitalization

In the case of Mexico, the rapid growth of loans was accompanied by a rapid deterioration of banks' lending portfolio. NPLs increased from 4.2% in 1992 to 9% at the end of 1994. Figures for Korea, surprisingly, do not show an increase on NPLs. They practically remained unchanged during the years before the crisis. In fact, they declined from 5.2% in 1995 to 3.9% in 1996 and then went up again to reach 5.8% at the end of 1997.

During the same period, banks in both countries show a decreasing level in the capitalization. As shown in table 2, the average BIS capital ratio of Mexican commercial banks decreased from

9.03% in 1992 to 8.0 at the end of 1994, while in the case of Korean banks it decreased from 9.3% in 1995 to 7.1% at the end of 1997. Also, as shown in table 2, the profitability indicators such as return on assets (ROA) and return on equity (ROE) in both countries rapidly deteriorated during the same period.

Certainly, all the above figures showed some worrisome signs in both banking systems and a progressive deterioration of banks' soundness. However, it would have been quite difficult to predict through these indicators alone the magnitude of the banking crises that started in Mexico and Korea in December, 1994 and December, 1997. What caused then the deep banking crises of Korea and Mexico? The argument of the rest of this section is as follows: in spite of major efforts of both countries to establish a market-based financial system, serious deficiencies in the overall framework of credit allocation still persisted. The intended transitions from a government owned and managed banking system to a market-based banking system were still incomplete and, as a result, the rebirth of Korean and Mexican banks as efficient and competitive institutions had not occurred yet.

Thus, the roots of both banking crises should be found in the inefficient framework for credit allocation and the poor incentives for prudent management of banks existing in Korea and Mexico. These deficiencies were mainly reflected in the poor legal framework, lax prudential regulation and supervision, lack of reliable information on the soundness of the banking system, lack of risk management capacity and inefficient management of banks, persistent government interference in lending decisions, and weak market discipline. Eventually all these deficiencies, aggravated by a deteriorating macroeconomic scenario, became the main roots of the deep banking crisis that started in Mexico and Korea in December, 1994 and November, 1997.

Underlying Weaknesses of the Banking Sectors of Korea (1997) and Mexico (1994)

Table 3 scores and compares the main weaknesses of the Korean and Mexican banking systems existing before the crises.

Legal Framework and Prudential Regulation

As shown in table 3, serious weaknesses existed in the regulatory framework of the banking sectors of Korea and Mexico, particularly in the bankruptcy laws, capital requirements, accounting standards, loan classification and provisioning rules, large exposures and connected lending limits.

Weak bankruptcy laws. In both countries, creditors' rights were not adequately protected nor effectively enforced. As a result, the collection of loans from defaulted debtors was a lengthy process. In Mexico, for example, the recovery of a loan through the legal process could (and still can) take between three and seven years, since defaulted debtors can delay the foreclosure process by presenting objections to the resolution process. Bankruptcy court judges are obligated to pass resolutions on each objection presented by debtors. Moreover, there are only few judges in Mexico to hear bankruptcy proceedings, making the enforcement of creditors' rights a long and expensive process.

Table 3
Banking Sector Weaknesses Before the Crises
Selected Indicators

Minimum Institutional Pre-conditions for an Efficient Banking System	Mexico (1994)	Korea (1997)
Adequate legal framework and prudential regulation		
1. Rapid collection of guarantees and recovery of loans when debtors are no longer able to repay	0	1
2. Capital requirement in accordance with the Basle Capital Accord	1	1
3. Accounting practices in compliance with internationally accepted standards	1	1
4. Loan classification system designed to measure borrowers' present and future capability to repay	1	1
5. Loan loss provision requirements in accordance with international standards	1	1
6. Adequate regulations to limit market risks (interest rate, foreign exchange and liquidity)	1	1
7. Regulations on large exposure and connected lending in compliance with international standards	2	1
Effective supervision of the banking industry		
8. Single specialized entity in banking supervision	3	1
9. Independent supervisory authority	1	0
10. Supervision focused not only in assessing compliance with the law, but also in identifying and limiting potential risks for banking institutions (off site supervision)	0	0
11. Consolidated supervision	0	0
12. Adequate manuals for on site examination	0	1
13. Regular training programs for bank supervisors	1	1
14. Supervisory authority empowered to impose a wide range of sanctions including change of management and suspension of activities	1	0
Qualified management		
15. Bank managers with several years of experience in the banking industry	1	2
16. Licensing process that requires strict assessment of technical skills and moral integrity of owners and management	1	1
17. Management of banks free from political interference	3	0
18. Adequate credit and market risk management capacity within banks	1	1
Strong market discipline		
19. Set of prompt corrective actions to be applied when financial institutions fail to meet the minimum capital requirements	0	0
20. Strict sanction for fraudulent activities and illicit financial practices	1	1
21. Rapid exit mechanisms for non-viable financial institutions	0	0
22. Limited deposit insurance	0	3
Total	20	18

0=no compliance, 1= poor compliance, 2=satisfactory compliance, 3=full compliance

Source: Bank staff estimates

In Korea, the framework to protect and enforce creditors' rights was also deficient. Debtor and creditors relations were intimately influenced by the government, which sought to maintain market stability and industrial growth by inhibiting contentious debt collection and by actively promoting voluntary schemes of rescheduling. Moreover, proceedings used to be cumbersome

and slow and, in the case of large corporations, public policy interest often prevailed over rational economic decisions.

Capital requirements. Another major weakness of the regulatory framework of Korea and Mexico lies on the capital requirements. Although commercial banks in both countries are required to comply with the minimum 8% capital ratio recommended by the Basle Capital Accord, the quality and quantity of capital is overstated because the capital is calculated using different procedures as those recommended in the Capital Accord.

In Korea, for instance, trust accounts of commercial banks were not subject to capital requirements, although they represented 40% of banks' total assets.² In Mexico, banks have been allowed to include deferred income taxes, inflation revaluations and subordinated debt in the Tier 1 capital, thus overstating the quality of capital. In addition, when Mexican banks were privatized in 1991 and 1992, the banking authorities failed to proof the sources of capital used to acquire the banks. Recent investigations have found that some banks' owners had borrowed capital from other domestic financial institutions to buy the banks (see M. Mackey, 1999), thus bringing debt instead of capital into their institutions.

In addition, it could be said that the 8% capital requirement of both countries is insufficient because most of the banks lack adequate risk management tools and procedures (particularly regarding the credit risk), sound accounting and valuation methods were not in place, the legal systems were weak and corporate governance was poor.

Accounting standards. Since in Korea and Mexico financial information disclosed by banks was not prepared in accordance with international standards, it was difficult for the authority as well as market participants to assess the soundness of banks and identify the magnitude of their credit and market risks. In both countries, the subsidiary, affiliate, and off-shore operations of banks were not reported on a consolidated basis, making it difficult to have a complete overview of the banks' operations. Furthermore, in both countries profits were overstated because banks were allowed to accrue interest on past due loans. In the case of Mexico, banks were also allowed to create loan loss provisions through a charge on capital reserves without passing through the income statement. Moreover, in both countries securities held by banks were not marked to market.

Loan classification and provisioning. Another factor that contributed to underestimating the extent of banks' current and potential losses were the lax loan classification and loan loss provisioning guidelines existing in Korea and Mexico. In both countries, loan classification was mainly based on borrowers' repayment history rather than current or near term capacity to repay. In addition, prudential rules allowed banks to roll over and reschedule trouble loans which remained classified as performing loans.³

Large exposures and connected lending. Of both countries, only Mexico had adequate limits to avoid excessive credit exposures of banks to a single borrower or related group of borrowers. The following table compares the limits to credit exposures in Korea and Mexico with international standards.

Table 4
Credit Exposures Limits in Mexico and Korea

	International standards*	Korea (1997)	Mexico (1994)
Credit ceiling to a business group as a % of a bank's equity capital	25	45	30
Credit ceiling to a single person as a % of a bank's equity capital	25	15 for loans 30 for guarantees	10

*As defined by the Basle Committee on Banking Supervision
Source: FSS and CNBV

As mentioned above, the Korean limits on connected lending and large credit exposures were issued in August, 1997 in order to reduce the already huge expose of banks to their main borrowers, the chaebols. However, given the existing huge exposure of banks to chaebols, the rapid enforcement of these limits was not possible.

Supervision

A major weakness of both banking systems was the poor quality of supervision of financial institutions. In both countries, the supervisory function was primarily oriented to assure compliance with existing laws and regulations, rather than to identify and prevent excessive risk taking at single institutions as well as at the banking system as a whole. Off-site supervision did practically not exist neither in Korea nor in Mexico. Also, since banks were not required to report consolidated financial statements, supervision of parent companies and subsidiaries could not be done on a consolidated basis.

It should be acknowledged that in the months before the crises, important efforts were taking place both in Korea and Mexico to improve their reporting systems and regulations on liquidity and foreign exchange risks. Also, both countries had started to adopt the US CAMEL system. Notwithstanding these efforts, the banking supervisory agencies in both countries still lacked of the infrastructure and tools for promptly identifying and limiting the excessive credit and market risks that financial institutions were taking.

The quality of banking supervision in Korea and Mexico was also affected by the lack of autonomy of supervisory agencies. Neither the National Banking Commission of Mexico (CNB) nor the Office for Bank Supervision of Korea were independent entities. The lack of autonomy of the supervisory agencies made the supervisory function less rigorous, particularly if it contrasted with the prevailing political environment or, in the case of Korea, it opposed to the Ministry of Finance's (MOFE) policy direction.

Quality of Management

Although in Korea and Mexico commercial banks were owned and managed by the private sector, banks in both countries lacked qualified management. In Korea, banks as well as all other financial intermediaries had been used, since the 1960's, as an important means to achieve government's economic objectives. Domestic financial intermediaries were expected to mobilize

household savings in order to finance both investment in “strategic” economic sectors as well as the expansion of export-oriented firms under preferential conditions. The government used to interfere in banks’ lending decisions by appointing and removing senior management, establishing credit controls and controlling interest rates. Although, as shown above, government interference in banks’ lending decisions was considerably reduced during the 1990’s, bank managers developed few skills for independent, efficient and prudent management. Several legacies from the past government intervention model remained. The governance structure of commercial banks, for example, remained unchanged, and informal controls on the determination of interest rates continued to exist.⁴ In addition, lending decisions were still largely based on the availability of collateral rather than on a proper assessment of risk or future repayment capacity.

In comparison to Korea, in Mexico bank management was free from political interference. Once Mexican banks were privatized, the appointment and removal of managers were decided by the banks themselves. Also, managers were completely free to make lending decisions. However, since commercial banks had been owned and managed by the government from 1982 to 1991, most of the new owners and managers of banks did not have sufficient experience in the banking business. Although most of them came from existing domestic brokerage houses, they lacked of experience in the traditional lending business and, especially, in the prudent and effective management of credit risks and other risks associated with banking.

Another factor that affected the efficient management of Mexican banks was the fact that the government failed to prevent individuals with dubious moral reputation from acquiring banking institutions. Indeed, three years after the privatization process was completed, the financial authority had already removed management of 4 of the 18 privatized banks due to extensive fraudulent activities. When authorities started to deeply examine banks, they found extensive evidence of fraudulent management in several other banks.

Market Discipline

In both countries, market discipline was hampered by the reluctance of financial authorities to let unviable banks fail, the lack of prompt corrective measures to be imposed on banks facing capital shortfalls, the unwillingness of banking authorities to impose strong sanctions on banks for illicit practices and, in the case of Mexico, by a deposit insurance that practically guaranteed all banks’ liabilities with the exception of subordinated debt.

Neither in Mexico or in Korea banks had ever been closed. In fact, exit mechanisms for ailing banks did not exist. In Mexico, for instance, authorities were legally unable to rapidly wind-up insolvent banks. As in many other countries, they require the prior consent of courts to force the bankruptcy of a banking institution. However, given the outdated bankruptcy law, the approval is lengthy in Mexico and impedes the regulatory authority from rapidly conducting bankruptcy proceedings. Moreover, historically neither Mexico nor Korea had registered cases where banks or bank managers have been severely punished for fraudulent or illicit behavior.

The Breakout of the Crisis

Given the inadequate framework for credit allocation and the lack of incentives for prudent management of banks described above, it is not a surprise that the soundness of the banking systems of Korea and Mexico started to deteriorate after the liberalization and deregulation of both banking systems took place.

The deterioration of banks' soundness was exacerbated by the adverse macroeconomic scenario that Mexico and Korea faced during 1994 and 1997, respectively. In both cases, the appreciation of their domestic currencies led to an unsustainable current account deficit which was financed by short-term capital inflows. In addition, both countries started to face large capital outflows resulting from the deteriorating investors' confidence on their macroeconomic fundamentals. Investors confidence decreased further as a result of the domestic political shocks, in the case of Mexico, and the default of domestic corporations and regional distress in the East Asia region, in the case of Korea.⁵

Thus, the apparent stability of the banking systems came to an end when the Korean and Mexican governments suddenly announced the devaluation of their domestic currencies in November, 1997 and December, 1994, respectively.

In both cases, the currency devaluation provoked significant foreign exchange losses for banks and enterprises. In the first three months of the crisis, the Mexican peso and the Korean won devalued by 120% and 110%, respectively. Also, the sharp increase in interest rates along with the rapid drop of economic output that followed to the devaluation prevented many debtors from servicing their debts, provoking a rapid deterioration of the loan portfolio of banks. In the first three months after the devaluations, inter-bank rates increased from 13.8% to 23.1% in Korea, while in Mexico they went up from 20% to 118% in the same period. Moreover, the financial instability of domestic markets along with the loss in confidence triggered by the devaluations made it difficult for banks to roll-over their short term foreign currency liabilities, hence provoking a liquidity crisis.

The impact of the currency devaluations on the banking systems was devastating. However, the banking crises can not be exclusively attributed to the currency devaluations, not even to the economic downturn or the liquidity problems that followed it. As shown in the previous section, the roots of the crises were structural given the poor and inefficient framework for credit allocation. In fact, it could be argued that both banking crises were going to happen even without the currency crises.

2. THE MANAGEMENT AND RESOLUTION OF THE BANKING CRISES

The abrupt currency devaluations that Mexico and Korea faced in December 1994, and November 1997, respectively, triggered not one, but several crises: a balance of payment crisis, a banking crisis, and a corporate sector crisis (in the case of Korea), all together provoking an immediate and deep economic downturn. In this context, the resolution of the banking crisis became one of the key priorities of both governments to restore investors' confidence in their

economies, stabilize their currencies, address the structural weaknesses of their economies, and resume economic growth.

This section will focus exclusively on the analysis and comparisons of the management and resolution of the banking crises of Mexico and Korea. The linkages of the bank restructuring process with the macroeconomic adjustment program and the restructuring of the domestic corporate sector that followed the crisis is beyond the scope of this paper. The focus of the paper will be the commercial banks which in both countries constitute the largest type of financial intermediaries.

In general terms, the resolution of a banking crisis pursues the following goals: to contain systemic risks, identify and mitigate the causes of the crisis, restore the solvency and profitability of institutions, establish an adequate framework for the efficient and sound development of the banking system, and, to the extent possible, minimize the fiscal costs of a crisis. The resolution of a crisis usually involves the following stages:

- containing systemic risks
- establishment of an overall crisis resolution unit
- recognition of losses and establishment of an strategy for restoring the solvency of the banking system
- reduction of bad assets through purchase of NPLs
- recapitalization of banks
- corporate/household debt restructuring;
- strengthening of prudential regulation and supervision
- management and disposition of impaired assets

As it will be shown below, success to rapidly and effectively resolve a crisis will depend not only on the strategies and policies chosen, but also on institutional capacity of the government to manage it, the timing and sequencing of reforms along with a wide set of social and political factors. Following sections will analyze and compare the strategies and tools used by Korea and Mexico to manage and resolve their banking crises. For the convenience of the reader, table 5 summarizes the main arguments to be discussed in the following sections.

Table 5
Management and Resolution of the Banking Crises of Korea and Mexico

Pre-conditions for a rapid and successful resolution of a crisis	Korea	Mexico
Rapid and effective control of systemic risks	Yes	Yes
Institutional capacity to manage the crisis	Limited	Limited
Rapid and realistic recognition of losses	Yes	No
Policies and strategies		
Purchase of NPLs	<ul style="list-style-type: none"> • One-time • Purchases at market value 	<ul style="list-style-type: none"> • Several rounds • Purchases at face value
Recapitalization of banks	Government-based	Market-based
Debt restructuring	<ul style="list-style-type: none"> • Slow process • It covered only corporate debt restructuring 	<ul style="list-style-type: none"> • Slow process • It covered practically all types of debtors • Direct subsidies to banks and debtors • Moral hazard problems
Management and disposition of impaired assets	Rapid sale of assets	Delayed
Strengthening of prudential regulation and supervision	Rapid process	Rapid process
Quality of management		
Accomplishment of main objectives pursued to resolve the banking crisis	Adequate	Sufficient
Speed of Reforms	Rapid	Slow
Transparency of decision making	Yes	No, given the large scope for discretionary decisions
Political and social obstacles faced for bank restructuring	Weak	Strong

Source: Bank staff estimates

Containing Systemic Risks

Given the weak financial condition of banks in Korea and Mexico, the loss of investors' confidence in the domestic financial markets and the uncertainty about the capability of the Mexican and Korean governments to manage and resolve their crises, the risk of a collapse of the banking system due to a deposit run became one of the most serious risks faced by the banking authorities in both countries. In this context, one of the most important challenges faced by banking authorities in Korea and Mexico was to restore public confidence in the banking system, avoid a deposit run, and limit all those risks that could endanger the payment system.

To do that, the banking authorities of Korea and Mexico determined that no bank would be allowed to default on its liabilities. In particular, in both countries the government determined that it would fully guarantee bank deposits, provide liquidity to banks to meet their short-term liabilities in both domestic and foreign currencies and, in the case of Mexico, would also provide temporary capital to help banks to meet the minimum capital requirement.

Deposit Insurance

Both Korea and Mexico reacted in similar ways to protect banks' deposits. In Korea, the government fully guaranteed all deposits at all financial institutions until the end of 2000. It also merged all the existing deposit insurance agencies into a new agency, the Korea Deposit Insurance Corporation (KDIC). In Mexico, practically all banks' liabilities with the exception of subordinated debt were already implicitly protected by the Fund for Protection of Bank Savings (FOBAPROA). So, when the crisis started, the government ratified its commitment to continue to guarantee banks' liabilities. In addition, the intended deposit insurance reform, largely discussed before the crisis, was postponed until 1997.

Liquidity Support

Initially, almost all banks in Korea and Mexico required immediate liquidity support to meet their short-term liabilities in foreign currency. In both countries, the central bank provided lines of credit with short repayment periods to all banks facing liquidity problems. The interest rate was set in such a way that it would incentive rapid repayment of loans (the annual interest rate for current loans was 23% in Mexico and Libor plus 225 basis points in Korea). Neither in Korea nor in Mexico there was fiscal cost due to this type of liquidity support as the banks repaid the loans to the central bank in full by September, 1995 in the case of Mexico and by April 1999 in the case of Korea. Total support to the banks under this scheme was US\$ 46.4 billion for Mexico and US \$ 27 billion for Korea.

Temporary Recapitalization

In Mexico, in addition to the above two measures, the government established the Program for Temporary Recapitalization (PROCAPTE) in March, 1995 to provide temporary capital for those banks unable to meet the minimum 8% capital requirement. PROCAPTE was conceived as an additional instrument to confirm to the domestic and international financial markets that the government would support the domestic banks by giving them time to reach adequate levels of capitalization. As in the case of the liquidity support programs, all the PROCAPTE advances were rapidly repaid by the banks and no fiscal cost arose from this program.

In the context of the narrow objectives of all these measures, namely restore public confidence, avoid a bank run and limit systemic risks, the initial reaction of both Mexico and Korea to the crisis was successful. No single case of bank run occurred, public confidence in the banking system was preserved and most banks were able to return to the international capital markets and continue borrowing in foreign currency at similar rates to those prevailing before the crisis.

However, as it has been shown above, the banking systems in Mexico and Korea were not only facing liquidity problems or temporary capital shortfalls, but most importantly they were enduring deep insolvency exacerbated by the economic crisis. So, while the above measures provided temporary relief to the banks, they did not solve the main causes of banks' problems.

Crisis Management Unit

The rapid and successful resolution of a banking crisis requires the establishment of a special unit with wide powers to orchestrate a rapid response to the crisis, eliminate regulatory and administrative obstacles for the resolution process, design and implement a strategy, create consensus around it, coordinate involved government agencies, and ensure consistency and appropriate sequence of policies. To be successful, the unit should be established with adequate resources and highly qualified staff who should be freed of other duties that distract the tasks of the unit.

The establishment of a centralized unit for crisis resolution has several advantages. In the absence of a special unit, responsibilities for crisis management may be dispersed among several government agencies such as the ministry of finance, the central bank or the banking supervisory agency. Also, weak organizations or bureaucrats may not be able or willing to take politically-sensitive decisions. Furthermore, each agency involved in the resolution process may have its own set of institutional objectives and try to bring its own priorities for the crisis resolution program, leading to inconsistent measures or uncoordinated actions. Also, since the resolution of a banking crisis will likely affect politically or economically strong groups, dispersed and weak institutions could be easily influenced by affected groups, thus obstructing or even impeding the implementation of those actions required to resolve a crisis. Following table compares the institutional arrangements made in Mexico and Korea to manage and resolve the banking crises.

Table 6
Institutional Arrangements for Resolving the Korean and Mexican Banking Crises

Crisis Management Unit (CMU)	Korea (1998)	Mexico (1995)
Unit responsible for managing and resolving the crisis	Special Task Force within the Financial Supervisory Commission (FSC)	National Banking and Securities Commission (CNBV)
Budget, staff, and autonomy of the CMU		
Wide Budgetary Resources	No	Yes
Staff devoted on a full time basis to the management of the crisis	Yes	No, given their supervisory responsibilities
Recruitment of qualified staff in areas such as: mergers and acquisitions, bank restructuring, debt and corporate sector restructuring, asset management and disposition	Staff recruitment in form of secondments from research institutes, the central bank and the ministry of finance. No recruitment from the private sector.	No
Independence from other government agencies	Limited	Wide
Powers/authority of the CMU to:		
Establish preventive and corrective measures	Yes	Yes, <i>de facto</i>
Determine the viability of a banking institution	Yes	Yes, <i>de facto</i>
Restructure banking institutions	Yes	Yes, <i>de facto</i>
Establish recapitalization schemes	Yes	Yes
Decide criteria for purchases of NPLs	Yes	Yes
Determine criteria for the sale and disposition of acquired NPLs	No	Limited
Issue and change prudential regulations	Limited	Limited

Source: FSS and CNBV

As shown in the above table, there are some important differences regarding the institutional arrangements made for resolving the crisis. In Korea, the Financial Restructuring Unit, a special task force within the Financial Supervisory Commission (FSC), was created with the mandate of resolving the banking crisis. It was granted a wide set of powers to resolve it. However, its budget was limited and, as a result, it could not (and probably did not have the intention to) hire external experts in areas in which civil servants had only limited expertise, such as corporate debt restructuring, due diligence, mergers and acquisitions, and asset management, all of them important for resolving the crisis. FSS's staff was recruited from the former banking supervisory agency, leading research institutes, the central bank and the ministry of finance. To be able to work on a full time basis for managing the crisis, all the staff was freed from their previous responsibilities.

In Mexico, no special unit was created to manage and resolve the banking crisis. The resolution of the crisis was left in the hands of the financial supervisory authority, namely the National Banking and Securities Commission (CNBV). Although this institution did not have budgetary constraints, it did not hire external experts to manage the crisis, it relied on its own staff. As in the case of Korea, independence of this institution was limited since important decisions had to be formally made in consultation with the central bank and the ministry of finance. Also, the staff in charge of the management of the crisis was not freed from their responsibilities of supervising institutions.

Regarding the powers to deal with the crisis, CNBV had *de facto* enough authority, but not extraordinary powers, to design a strategy for resolving the banking crisis, determine the viability of banks, design schemes for bank restructuring and recapitalization, determine the amount of purchases of NPLs, and intervene in practically all the stages required for resolving the banking crisis. In the case of Korea, FSC was granted *de jure* as well as *de facto* the authority and the responsibility for resolving not only the banking, but also the corporate sector crisis.

Prompt Recognition of Losses

The second precondition for a rapid crisis resolution requires the government to rapidly recognize actual and potential banks' losses. Failure to realistically recognize the magnitude and causes of the banks' problems prevents authorities from establishing a comprehensive program to resolve the crisis. Furthermore, an unrealistic recognition of problems will likely lead to the prescription of insufficient or ineffective measures, which may provide some relief in the short-term, but fail to address the underlying causes of a crisis. Moreover, since banks' problems rapidly aggravate during a crisis, delay or reluctance to recognize and stop banks' losses will allow unviable banks to stay in the market system and incur in larger losses.

A proper recognition of banks' problems is not always an easy task, because the government may be unable or unwilling to measure the true extent of bank's losses. On the one hand, the valuation of assets and liabilities at market prices may be difficult in periods of financial distress and volatility. Moreover, adequate information on banks' financial situation may not be rapidly available, not even to the banking authorities, if existing domestic accounting practices do not meet international standards. In particular, recognition of banks' losses may be difficult if

domestic accounting standards allow income to accrue interest on non-performing loans, bad loans can be rolled over, or existing loan classification and provisioning rules are not strict.

On the other hand, banking authorities may be reluctant to recognize banks' losses if a banking crisis simultaneously occur with a currency crisis or with periods of economic difficulties caused by unexpected internal or external shocks. When the economic scenario suddenly changes, financial authorities may think that bank problems are temporary, not structural, hoping that time and economic recovery will resolve problems.

In this sense, one of the most important challenges of any government attempting to resolve a banking crisis is to realistically recognize existing and potential banks' losses and its causes in order to formulate an adequate strategy to resolve it. In particular, one of the most urgent decisions that policy makers must make is to determine which banks are viable and which not. Table 7 compares the criteria and mechanisms used in Mexico and Korea to identify viable and non-viable financial institutions.

Table 7
Criteria and Procedures used for Identifying Viable and Non-Viable Banks
in Korea and Mexico

Key Variables	Korea	Mexico
Who decides?	FSC with opinion of independent committee formed by representatives of the private sector and research institutes	CNBV alone
How does it decide?	Same principles for all banking institutions	On a case by case basis
Main criteria used to determine the viability of a banking institution.	<ul style="list-style-type: none"> • Compliance with 8% capital requirement • Feasibility of rehabilitation plan • Independent diagnostic review 	CNBV's own assessment on the capability of banks' shareholders to inject new capital to their institutions
When does it decide?	One-time decision for all banking institutions (June 28, 1998)	Decisions have occurred at different points in time during the last five years.

Source: FSS, CNBV and Mackey (1999)

As shown in the above table, there are important differences in the criteria and procedures used in Korea and Mexico for determining the viability of banking institutions. In Korea, decision making was based on explicit criteria and procedures and consisted of five steps:

- (i) All institutions not meeting the minimum capital adequacy ratio of 8% at the end of 1997 were identified as potentially non-viable.
- (ii) Those potentially non-viable institutions, 12 out of 24 commercial banks, were required to submit a rehabilitation plan.
- (iii) In order to have a reliable picture of banks' financial condition, FSC hired recognized accounting firms to conduct a diagnostic review of each of the ailing banks using international standards.

- (iv) To evaluate the rehabilitation plans, an independent Appraisal Committee was established. The Committee was comprised by members of FSC along with experts from research institutes, independent lawyers and auditors.
- (v) Taking into account the results of the Appraisal Committee, the Financial Supervisory Commission, determined the viability of each banking institution.

On June 28, 1998 the FSC announced its verdict. Five small to medium sized banks were closed, with their assets and liabilities transferred to five stronger banks in purchase and assumption (P&A) operations. The other 7 remaining troubled banks received conditional approval and were requested to submit revised plans by the end of July, 1998. As it will be shown below, since then no other banks have been closed, and 12 remaining weak institutions have been encouraged to merge and look for foreign shareholders.

In comparison to Korea, Mexico has proceeded in a different way. Firstly, in Mexico decisions on the viability of banks have been taken by the CNBV alone. While Korea has based its decisions on the results of a diagnostic review and the opinion of an independent committee, in Mexico CNBV has determined the viability of banks based on its own assessment. At the request of the CNBV, banks in Mexico have also been subject to diagnostic reviews by independent audit firms. However, the results of the diagnostic reviews have not been used to determine the viability of a bank.

A second difference is that while in Korea the same principles and procedures for determining the viability of an institution were applied for all commercial banks, in Mexico the viability of banks was decided on a case by case basis by the CNBV. In fact, the CNBV has not established yet specific criteria and standard procedures for determining the viability of a banking institution. As a result, decisions have been discretionary and based on the CNBV's own assessments on the capability of banks' shareholders to inject new capital into their institutions.

A third major difference is that decisions on the viability of Mexican banks have not been made at once as in Korea, but at different intervals. Indeed, the average number of months going from the identification of problems in the commercial banks to their intervention has been 17 months (Mackey, 1999, pp. 149-151) while in Korea has been much more shorter, usually 1 month after concluding the diagnostic reviews on banks.

The Mexican approach reveals the inability (or reluctance) of its financial authorities to rapidly recognize the magnitude of banks' losses. While Korea decided to assess the solvency and viability of all banks according to explicit and strict standards and procedures, Mexico has been reluctant to do it. Instead, banks were allowed to stay in the market until the CNBV finds evidence of fraudulent activities or incapability of its shareholders to inject fresh capital into the troubled institutions. Meanwhile, as shown below, all non-intervened troubled institutions have benefited from the several programs for recapitalization and purchases of non-performing loans in which a large amount of fiscal resources has been used.

However, as discussed below, evidence has shown that in spite of rapid macroeconomic recovery of Mexico, several rounds of purchases of non-performing loans, and borrowers' debt relief programs, only a few institutions not intervened during 1995 will be able to survive. Therefore,

by permitting troubled institutions to stay in the market, troubled banks have continued to make losses which eventually would have to be allocated to the public budget, or passed to depositors and borrowers in form of higher interest spreads (through either lower deposit rates or higher lending rates).

Strategies and Policies for Resolving the Crises

Once it is determined which banks are insolvent, which are weak but viable and which are sound, the next step for resolving a banking crisis is to establish mechanisms for speeding up the exit of non-viable banks and strengthening the soundness of weak but viable institutions.

This is an important step in resolving a banking crisis, because banking authorities have to make crucial decisions as to how to restructure non-viable banks and recapitalize weak but viable institutions, how and under what conditions bad assets will be removed from banks, to what extent current shareholders will assume losses, how much fiscal resources should the government allocate to resolve the crisis etc. In few words, the government needs to establish a comprehensive strategy and action plan to resolve the crisis and restore the soundness and profitability of banks.

Following sections will compare the policies implemented in Mexico and Korea to resolve their banking crises. As discussed below, the Mexican strategy can be categorized as gradualist, with slow progress and limited impact of policies. Whereas the Korean strategy can be described as a once-and-for-all solution, given their rapid response and implementation of policies to purchase NPLs, recapitalize banks with public resources and dispose impaired assets.

Purchases of Non-Performing Loans

One of the main policies used to prevent the further deterioration of a banking system's financial condition is to remove the banks' bad assets by transferring them to a separate entity. This kind of operations are usually done by a special entity that purchases the banks' NPLs at a determined price. Sometimes these entities become responsible for managing, collecting or selling the acquired NPLs. Table 8 compares the criteria and mechanisms used in Mexico and Korea to purchase NPLs.

According to table 8, there are six important differences in the criteria and mechanisms used for buying NPLs from commercial banks in Korea and Mexico.

Firstly, in Mexico practically all non-intervened banks were allowed to sell a part of their NPLs to the government. As shown below, however, even after several rounds of purchases of NPLs, some of those institutions were unable to remain in the market. In Korea, only banks that (i) absorbed weak banking institutions, (ii) resulted from the merger of two weak institutions or (iii) resulted from the merger of a weak and a strong bank were eligible to sell their NPLs to the government.

The second major difference lies on the purchase price of the loan. In Mexico, in order to make more attractive for banks to inject capital into their institutions, loans were bought at face value

less provisions during the first round of purchases. However, in subsequent rounds of NPLs purchases, the CNBV relaxed the provisioning requirements in order to pay a higher price for the loans.⁶ Furthermore, Mexican were more generous by allowing banks to sell loans that originally were not supposed to be bought, such as related party loans, loans discounted with domestic development banks, loans held by companies in bankruptcy, etc.

Table 8
Criteria and Mechanisms Used to Purchase NPLs

Criteria	Mexico	Korea
Type of loans bought	All bad loans	Loans classified as substandard and below
Eligible banks to participate in the sale of NPLs	All non-intervened banks. Banks' shareholders had to commit to inject one dollar in fresh capital for every two dollars of NPLs bought.	<ul style="list-style-type: none"> • Banks acquiring weak institutions under (P&A) operations • New banks resulting from the merger of two weak, but viable institutions • Merger (sound bank and nonviable bank)
NPLs purchased as of June, 1999	US \$12.44 billion*	US \$27 billion from commercial banks plus US \$19 from non-banking financial institutions
NPLs purchased as % of total loan portfolio	13.7	9
Purchase price	100 % of the loan's face value less provisions	45% of the loan's face value for secured loans and 3% for insecured loans
Instrument used to pay for the purchase	Ten-year promisory notes, backed by the government. Interest was payable on the notes, but accrued over the term and was payable only at maturity (non-tradable bond).	Tradable bond backed by the government with interest paid semi-annually.
Number of times in which banks have sold NPLs	Several rounds	One round (in exceptional cases two rounds)
Institution that purchases NPLs	Fondo Bancario de Proteccion al Ahorro (FOBAPROA)	Korea Asset Management Corporation (KAMCO)
Responsibility for administering and collecting NPLs bought	Bank	KAMCO

* Includes loans from banks and transport loans.

Sources: FOBAPROA, IPABE and KAMCO

In comparison to Mexico, Korea established stricter criteria for pricing NPLs. Before September 1998, the Korea Asset Management Corporation (KAMCO) used a complicated system for valuing and pricing NPLs buying NPLs at an average 55% of their face value. However, in September, 1998 the system was modified. Since then, secured loans have been bought at only 45% of their face value, while unsecured loans have been bought at 3% of their face value. Table 9 describes in more detail the criteria for pricing NPLs in Korea.

Table 9
Type of Assets bought by the Korea Asset Management Corporation

Assets	Sub-type	Purchase Price
Ordinary NPLs (non-performing assets currently in default, making no payments)	Secured NPLs	45% of appraised value of collateral
	Unsecured NPLs	3% of face value
Special NPLs (non-performing assets that have obtained court protection)	Secured NPLs	45% of face value
	Unsecured NPLs	3% of face value

Source: KAMCO

Thirdly, in Mexico the purchase of NPLs was established not only as a program to remove bad assets from weak banks, but also as an incentive to encourage banks' shareholders to inject new capital into their institutions. Thus, banks willing to sell their bad assets to the government had to increase their capital. For every dollar injected by shareholders into the bank, the government bought two dollars of non-performing loans (face value). In Korea, on the contrary, the government has bought NPLs from banks regardless of the new capital injected by their shareholders. In fact, when a bank faces a capital shortfall resulting from the sale of NPLs, the government will inject capital and automatically become shareholder of the institution, usually the major shareholder.

A fourth important difference lies on the responsibilities for the collection and administration of the loan. In Korea, KAMCO has the mandate to administer and collect NPLs. In Mexico, on the contrary, when FOBAPROA purchases a loan, it acquires only an interest in the cash flows from it. The bank remains responsible for the collection from its customers and for the administration of the loan portfolio.

A fifth major difference lies on the share of losses derived from the collection of NPLs. As mentioned above, in Mexico NPLs have been bought at the highest possible price (face value) less provisions. However, since in most cases only a small fraction of value of a loan can be recovered, the banks assume up to 25% of the resulting losses, and FOBAPROA all the remaining losses. In Korea, given that loans are bought either at 45% or at 3% of their face value, banks assume from the beginning a large loss. Once the loan is sold to KAMCO, KAMCO assumes any further loss (but also any possible gain) derived from the recovery of the loan.

Finally, a sixth major difference is the payment mechanism. In Mexico, when FOBAPROA bought NPLs, banks received ten-year promisory notes backed by the government.⁷ Interest is payable on the notes, but accrued over the term and they are payable only at maturity. In Korea, banks receive bonds issued by KAMCO backed by the government (interest is paid semi-annually), but, since they can be traded, banks can exchange them for liquid instruments.

When compared to Korea, Mexico appears to have been too benevolent with its banks, particularly with the banks' shareholders. Practically all weak banks were given the opportunity to transfer a large part of their NPLs to FOBAPROA at a very favorable price (face value less provisions). Moreover, definition of eligible loans which could be sold to FOBAPROA was relaxed to include related party loans, loans discounted with domestic development banks, etc.

Furthermore, the losses derived from the recovery of the loans were limited to a maximum of 25% for the banks.

The different approaches used in Korea and Mexico reveal two different set of objectives and approaches for bank restructuring. Mexicans have been generous and flexible enough to allow their banking institutions to gain time to recover. Shareholders have been given wide incentives and enough time to recapitalize their banks. Intervention of banks has been seen as the last policy option. Banks have been intervened only when shareholders fail (usually after several attempts) to inject capital into their institutions or when authorities have found evidence of wide fraudulent activities.

The Korean authorities, on the contrary, have been much stricter. Non-viable banks have been rapidly identified and restructured. Weak but viable institutions have received strong support from the government, but at the same time their shareholders have had to assume a large part of the losses. Purchases of NPLs have occurred at market values, while banks' shareholders have been "forced" to rapidly recapitalize their banks. Any capital shortfall has been covered by the government which has become the major shareholder of the Korean banking system.

Recapitalization with Public Resources

One of the first measures taken by financial authorities in Mexico and Korea to foster the recapitalization of banks was to lift the limits for foreign ownership of financial institutions. In Mexico, limits were lifted from 30% to 49% in 1997, while in Korea they were completely eliminated in 1998.

However, given the deep economic recession of Korea and Mexico, the lack of confidence on both financial systems, and the adverse international scenario that both countries faced after the devaluation of their respective currencies, banks could not rapidly find a foreign or domestic partner willing to inject the required capital. In order to restore the soundness of their banking system as rapidly as possible both countries established recapitalization schemes with public resources. Table 10 illustrates the different criteria and mechanisms used in Mexico and Korea to inject public resources into the banks.

As shown in the table, there are three main differences in the schemes used for bank recapitalization in Korea and Mexico.

First, in Korea the amount for injection of public funds into the banks has been allocated almost from the beginning. 64 trillion won, equivalent to US \$54 billion, were set aside for restructuring the financial sector in September, 1998. 32 trillion out of the 64 trillion won were allocated for recapitalization of commercial banks and, in a much minor scale, other financial institutions. In Mexico, on the contrary, no specific amount has been allocated for injections of public funds into banks. The amount has been periodically increased as needed.

Secondly, in Korea weak but viable commercial banks can obtain fiscal support only under three specific circumstances: When a bank acquires a weak institution under a P&A procedures, when a strong and a weak institution merge, and when two weak but viable institutions merge. In the first two cases, the fiscal support is used to compensate the strong bank for any possible losses

derived from acquiring a weak institution. In the third case, the bank resulting from the merger of two weak institutions receives fiscal support. In Mexico, the recapitalization of weak but viable banks with government resources has been made on a case by case basis. Usually, once FOBAPROA covers the bank's capital shortfall, the government sells its equity stake on the bank to a foreign investor or to another Mexican bank.

Table 10
Recapitalization of Banking Institutions with Public Resources

	Mexico	Korea
Institution that injects capital	FOBAPROA. In December 1998, a new institute replaced FOBAPROA. Its name is Bank Savings Protection Institute (IPABE).	Korea Deposit Insurance Corporation (KDIC)
Amount allocated for recapitalization	Variable, it has been increased as required.	32 trillion won (US\$ 26.6 billion)
Public resources used for Bank Recapitalization as of June, 1999	US \$ 61.5 billion (including resources for recapitalization and "saneamiento" restructuring)	US \$ 22 billion
Purpose of recapitalization	Cover deposit liabilities and capital shortfall	Cover deposit liabilities and capital shortfall
Target attempted with recapitalization	Help restore capital, but without a concrete target	Increase the CAR to 10%
Principles for recapitalization of insolvent institutions	<ul style="list-style-type: none"> • Write-down the equity of existing shareholders • Remove managers responsible for losses • Sale the governments' equity stake in the bank to a foreign investor 	<ul style="list-style-type: none"> • Write-down the equity of existing shareholders • Remove managers responsible for losses
Principles for recapitalization of weak, but viable institutions	Recapitalization decided on a case by case basis. Once the FOBAPROA covered the capital shortfall, the bank was either sold to foreign or domestic investors.	Banks participating in: <ul style="list-style-type: none"> • Business transfer (P&A) • New banks resulting from the merger of two weak, but viable institutions) • Merger (sound bank and nonviable bank)

Source: FSS, CNBV and FOBAPROA

Thirdly, in Korea, the amount of capital injected by KDIC into a bank must be enough to maintain the capital adequacy ratio of a strong bank that acquired a weak institution. In the case of merger of two weak institutions, then the capital injected has to be enough to bring the BIS capital ratio to 10%. In Mexico there is no specific target to be achieved with the recapitalization, the amount of capital to be injected is determined by the CNBV.

In both countries, when the government recapitalizes a bank, the fiscal support can be used either to cover both deposit liabilities of banks or capital shortfalls. At the end of 1998, the Korean government had become the owner of the 75% of the banking system.

Debt Restructuring

Efforts to recapitalize a banking system with either government or private funds can become unsuccessful if the borrowers' capability (or willingness) to repay their loans is not restored. In countries that have endured a deep economic crisis such as Korea and Mexico, the capability of

firms and individual households to repay their loans can only be restored if a sustainable process of economic recovery takes place, firms regain solvency through operational and financial restructuring, and private households' real income sufficiently increases to enable them to honor their liabilities.

Having acknowledged the enormous impact of the crisis on borrowers' ability to meet their liabilities, Mexico and Korea established special programs and incentives to support those weak but potentially solvent borrowers to repay their loans. Thus, special arrangements between creditors and borrowers were established to facilitate debt restructuring through temporary suspension of payments, interest rate reductions, extension of loan maturities, partial debt forgiveness, debt to equity conversions, etc.

As shown in the table below, there are five major differences in the debt restructuring processes that have taken place in Korea and Mexico:

Table 11
Debt Restructuring in Korea and Mexico

	Mexico (1995-1999)	Korea (1998-1999)
Banks' loan portfolio as % of GDP	21.4 in 1994	71.5 in 1997
Reluctance of borrowers to repay their loans	Yes	No
Borrowers allowed to participate in debt restructuring programs	Both large conglomerates as well as small debtors	Largest conglomerates (representing 60% of bank lending) and small and medium enterprises
Mechanisms for debt restructuring of large companies	Coordinating Unit for Bank-Enterprise Agreement (UBABE) which promoted a voluntary debt work-out program for the largest domestic corporations.	Two approaches for the corporate restructuring: <ul style="list-style-type: none"> • Top 5 chaebol restructuring program. • Voluntary debt work-out for the 6-64 companies.
Instruments for debt restructuring of small debtors	Voluntary debt-work-out programs for practically all small debtors.	Voluntary debt work-out for small and medium size enterprises
Subsidies	Government assumes up to 75% of any losses derived from debt restructuring of small borrowers.	None. Losses derived from debt restructuring are assumed by the banks.

Source: CNBV, FSS, FOBAPROA and KAMCO

Magnitude of the Problem. Firstly, by any parameter, the amount of troubled debt faced by Korean banks far exceeded the bad debt faced by Mexican banks. This is due to the fact that Korean banks' loan portfolios have been traditionally larger than in Mexico. While in Mexico banks' loan portfolios represented 21.4% of GDP in 1994, in Korea they represented 71.5% of GDP in 1997. In addition, Korean banks faced much more leveraged borrowers than Mexican banks. In Korea, for example, the debt to equity ratio of major 30 chaebols, which account for 60% of bank credit in 1997, exceeded 500% at the end of 1997. In Mexico, the average debt to equity ratio of major 500 domestic corporations did not exceed 83% in 1994.

Reluctance of Borrowers to Repay their Loans. A second major difference lies on the reluctance of borrowers to repay their loans. In comparison to Korea, Mexico not only faced the lack of capability, but also the unwillingness of a large part of borrowers to repay their loans. It

should not be a surprise that as a result of the dramatic increase in the average lending rates in the aftermath of the currency devaluation, which went up from 20% to 150% in less than three months, and the rapid drop of real wages of Mexican borrowers, which decreased by 30% during 1995, a large number of Mexican borrowers became unwilling to repay their loans. Mexican borrowers perceived that the rapid and huge increase in interest rates far exceeded any reasonable limit that debtors could and should be forced to pay. Furthermore, they perceived that the crisis was caused by a set of economic policy mistakes for which they were not responsible at all. Moreover, a large part of debtors across the country rapidly and spontaneously organized in several groups and stop repaying their loans, claiming for better conditions for debt repayment, given the deteriorating economic conditions.

Given the increasing social discontent provoked by the severe impact of the crisis on the living standard of the Mexican population, the government desisted from amending bankruptcy laws and enforcing creditors rights. Instead, as discussed below, it established several programs and incentives to “encourage” debtors to continue to repay their loans and/or restructure them.

Type of Restructured Debt. The third major difference lies on the type of restructured debt. In Korea, the debt restructuring process has basically focused on large conglomerates which account for the largest part of banks’ lending portfolio, and in a much less scale on small and medium enterprises. No debt restructuring schemes have been established for households. In Mexico, where banks’ lending portfolio is more diversified between large corporations, small and medium enterprises and small households, the debt restructuring process has practically covered all type of debtors.

Fiscal Support. A fourth major difference lies on the extent of fiscal support for debt restructuring. In Korea, no fiscal resources have been used to directly support corporate debt restructuring. Korean banks have been forced to bear any losses resulting from debt restructuring. In Mexico, losses derived from debt restructuring of large corporations’ have been assumed by banks. However, in the case of debt restructuring of small debtors, the government has assumed up to 75% of the resulting losses. According to the CNBV, the total fiscal costs of debtor programs amounted to 119.7 billion pesos, or US \$12.3 billion at the end of June, 1998.

Programs for Debt Restructuring. Programs and instrument used for debt restructuring in both countries vary according to the type of debtor. In Korea, there are basically four programs for corporate debt restructuring: (i) court liquidation of non-viable corporations, (ii) the voluntary top 5 chaebol restructuring program, (iii) voluntary debt work-out for the 6-64 companies and (iv) debt restructuring of small and medium enterprises. The second and third type of programs constitute the main instruments for corporate debt restructuring in Korea.

The restructuring program for the top 5 chaebols focuses on their voluntary restructuring efforts based on their Capital Structural Improvement Plans (CSIPS) agreed between banks and chaebols under the government sponsorship on December 18, 1998. Under the CSIPS, the top 5 chaebols have committed to reduce debts to equity ratios from 500% at the end of 1997 to less than 200% by the end of 1999 through financial re-engineering, sale of assets, mergers and acquisitions, removal of cross guarantees, reduction of affiliate companies and equity rights issues.

For the most distressed Korean 6 – 64 chaebols, Korea has adopted a creditor-led, extra-judicial framework for the resolution of problem debtors, incorporating the so-called London Rules. A Corporate Restructuring Agreement (CRA) was signed by Korean banks and non-bank financial institutions, which commits them to follow agreed workout procedures. These procedures include the appointment of eight Lead Banks that negotiate the workouts with the major corporate groups, and the establishment of an arbitration and quality control body in the form of the Corporate Restructuring Coordination Committee (CRCC). If financial institutions cannot agree on a workout strategy among themselves, or the Lead Bank and the debtor cannot reach agreement, the CRCC must resolve these differences.

In Mexico, a similar scheme for debt restructuring of large conglomerates was established in 1995. On December 13, 1995 the CNBV and the Mexican Bankers Association established the Coordinating Unit for Bank-Enterprise Agreement (Unidad Coordinadora para el Acuerdo Bancario Empresarial, or UCABE) to facilitate the debt restructuring of the largest 40 debtors through voluntary out-of-court agreements between creditors and debtors. These largest debtors generally have obligations to the banking system of between US\$150 million to US\$500 million and together represent approximately 10% of total bank lending. As in the case of Korea, in Mexico only companies considered viable in accordance with criteria established by the banks were eligible to participate in the UCABE debt restructuring schemes.

In addition to this program for corporate debt restructuring, Mexico has established several programs to help small debtors to repay their loans over the last four years. The type of debtors that have received benefited from these programs are: Micro, small and medium size enterprises; debtors from agriculture, fishing, livestock and forestry sectors; low and middle income residential mortgage holders, and individuals with personal loans and loans for acquisition of consumed durable goods and credit card debtors.

Strengthening of Regulation and Supervision

One of the most important steps for resolving a banking crisis is to identify and eliminate those distortions and weaknesses in the legal and regulatory framework that prevent banks from being prudently and efficiently managed. This requires the establishment of stricter standards on prudential regulation and supervision, better accounting and disclosure practices, rapid exit mechanisms for inefficient and non-viable institutions, and a strict set of sanctions for fraudulent and illicit financial practices.

Table 12 compares and scores progress of Korea and Mexico in improving the overall framework and incentive structure of their banking systems. As shown in the table, since the onset of the crisis both Korea and Mexico have made notable progress in adopting international standards of prudential regulation, improving both its on-site and off-site supervision, and overall modernizing the incentives and basic infrastructure for efficient banking system. In Korea, for example, a new supervisory agency, the Financial Supervisory Service (FSS), has been established to supervise the banking, securities, insurance and non-banking sectors on a consolidated basis. In a similar way, in Mexico the banking and securities supervisory agencies have been merged into the National Banking and Securities Commission (CNBV). Also, in both countries the banking law has been amended and new regulations have been issued to limit

connected lending, improve the loan classification and provisioning system, reduce exposure to foreign exchange risks, limit the coverage of the deposit insurance scheme, and improve accounting standards.

Table 12
Progress of Korea and Mexico in Improving their Frameworks for Credit Allocation

Minimum institutional pre-conditions for an efficient banking system	Mexico (1994)	Mexico (1999)	Korea (1997)	Korea (1999)
Adequate Legal Framework and Prudential Regulation				
1. Rapid foreclosure of guarantees and recovery of loans when debtors are no longer able to repay	0	0	1	2
2. Capital requirement in accordance with the Basle Capital Accord	1	2	1	2
3. Accounting practices in compliance with internationally accepted standards	1	2	1	3
4. Loan classification system designed to measure borrowers' present and future capability to repay	1	2	1	2
5. Loan loss provision requirements in accordance with international standards	1	1	1	2
6. Adequate regulations to limit market risks (interest rate, foreign exchange and liquidity)	1	3	1	3
7. Regulations on large exposure and connected lending in compliance with international standards	2	3	1	3
Effective Supervision of the Banking Industry				
8. Single specialized entity in banking supervision	3	3	1	3
9. Independent supervisory authority	1	1	0	2
10. Supervision focused not only to assessing compliance with the law, but also in identifying and limiting potential risks for banking institutions (off site supervision)	0	3	0	2
11. Consolidated supervision	0	2	0	2
12. Adequate manuals for on site examination	0	3	1	3
13. Regular training of bank supervisors	1	3	1	3
14. Supervisory authority empowered to impose a wide range of sanctions including change of management and suspension of activities	1	2	0	2
Qualified Management				
15. Bank managers with several years of experience in the banking industry	1	3	2	3
16. Licensing process that requires strict assessment of technical skills and moral integrity of owners and management	1	2	1	2
17. Management of banks free from political interference	3	3	0	2
18. Adequate credit and market risk management capacity within banks	1	2	1	2
Strong Market Discipline				
19. Set of prompt corrective actions to be applied when financial institutions fail to meet the minimum capital requirements	0	0	0	3
20. Strict sanction for fraudulent activities and illicit financial practices	1	3	1	3
21. Mechanisms for rapid exit of non-viable financial institutions	0	1	0	3
22. Limited deposit insurance	0	2	3	3
Total	20	46	18	55

0=non-compliance, 1=partial compliance, 2=satisfactory compliance, 3=full compliance with best international standards

Source: Bank staff estimates

Although progress in strengthening prudential regulation and supervision along with the overall incentive structure of the Korean and Mexican banking systems has been notable, some key elements of regulation and supervision in both countries are still behind the international standards. Rules and incentives to reduce intermediaries' exposure to both credit and market risks are weak. New loan classification systems based on borrowers' present and future capability to repay have not been implemented yet. Also, banks' risk-management systems are still incipient. Additionally, the new supervisory agencies still lack of independence. Moreover, in the case of Korea manuals and methodologies for supervision need to be upgraded, supervisors need to be trained into the new approach of risk-based supervision, and the overall infrastructure for on site and off site supervision of intermediaries needs to be strengthened.

The establishment of a new framework for the sound and efficient development of the financial system is in itself a long term task. Given the nature of these reforms, many changes in the framework for credit allocation will require a long implementation period. Enforcement of new accounting standards, capital requirements, loan classification and provisioning rules can only be done gradually.

Sale of Impaired Assets

When compared to Korea, Mexico has lacked an asset disposition strategy since the onset of the crisis. As shown in the following table, only a very marginal part of the assets acquired by FOBAPROA have been sold, while the value of the remaining assets has continued to decrease. The proceeds that could have already been obtained from the rapid sale of the FOBAPROA's assets would have helped to reduce the fiscal cost of the crisis.

Table 13
Acquisitions and Sales of Impaired Assets in Korea and Mexico
(face value)

	Mexico Dec. 94-June 99	Korea Dec. 97-June 99
Acquired NPLs (face value)	\$218,700 million pesos*	44 trillion won
Sales as of June, 1999	Less than \$10,000 million pesos	16 trillion won
Disposition and sales/total acquired assets (%)	Less than 4.6	36

* Including NPLs bought directly from banks and acquired as a result of banks' intervention

Source: FOBAPROA and KAMCO

Part of the reason for not selling the NPLs is because FOBAPROA did not have legal rights to collect bank loans. Under the loan portfolio purchase agreements, FOBAPROA had only an interest in the cash flow, not an interest in the loans themselves. Responsibility for administering and collecting loans lies on the banks themselves. Furthermore, if assets were completely transferred to FOBAPROA for sale, then the banks would no longer have responsibility for sharing the losses derived from their recovery.

The Mexican banks, however, do not have incentives to recover the loans. As mentioned above, the government bought the assets at a high price and assumed the large part of the losses derived

from the recovery of loans. Also, under the current bankruptcy and foreclosure laws, recovery of loans can take many years. Therefore, there is practically no incentive for banks to recover defaulted loans.

Mexico and Korea represent two different examples of loan recovery and disposition. As of end-June 1999, the total face value of the NPLs purchased in Korea by KAMCO was W 46 trillion (10 percent of GDP), for which KAMCO paid W 20.4 trillion. As shown in Table 14, KAMCO has already made some progress in disposing and selling acquired NPLs. The most successful recoveries have come from (a) international sales, (b) foreclosure auctions, and (c) collections.

Through these sales and dispositions, KAMCO has in fact recovered on average 53% of the face value of the loans it acquired. In other words, KAMCO has been able to recover more than what it paid (45% of the face value on average) for the NPLs. In Mexico, authorities estimate that only 20% of the face value of the FOBAPROA's assets will be recovered given their long and irreversible deterioration.

Table 14
Disposition and Sale of KAMCO's Assets

Disposition/Sale	Amount (face value)	Recovered amount
International sale	2.9	1.2
Foreclosure auction	2.1	1.0
Public Sale	0.2	0.1
Collection	11.3	6.5
Total	16.5	8.8

Source: KAMCO

There are at least three important lessons that can be drawn from the contrasting experiences between Mexico and Korea. Firstly, delay on selling and disposing acquired assets can be extremely expensive, since the value of assets deteriorate over time. Secondly, a rapid sale of NPLs can help authorities to reduce the fiscal cost derived from the purchases of NPLs. In fact, when the recovery is larger than the amount paid for the bad assets, the overall cost of a crisis could also be reduced. Thirdly, the creation of proper incentives for banks for asset recovery, the strengthening of the asset management and disposition functions at the acquiring agency, and the establishment of a proper legal framework for rapid asset recovery should be done at the early stages of the crisis.

3. ASSESSING THE MANAGEMENT AND RESOLUTION OF THE MEXICAN AND KOREAN BANKING CRISES

Mexico and Korea have made substantial progress in almost all the stages required to resolve their banking crises. Systemic risks, for instance, were rapidly controlled, investors' confidence on both banking systems has been restored, and programs to recapitalize banks have been established along with mechanisms to purchase, manage and dispose bad assets from the banking system. Moreover, prudential regulation and supervision have been significantly strengthened and authorities are in the process of addressing the overall structural causes of the crises.

Notwithstanding these achievements, the resolution of the Korean and Mexican banking crises has not concluded yet. As discussed below, both banking systems still need to restore their long term solvency and profitability. In addition, Mexico needs to address the dramatic drop in bank lending (more than 60% since 1994), whereas Korea needs to continue the restructuring of the still large debt of domestic corporations. Moreover, in both countries further improvements in the regulatory framework and incentive structure of their banking systems are still required. The large part of acquired bad assets needs to be sold, current government ownership of banks needs to be divested, and commercial banks need to strengthen their risk management capacity.

Since neither the Korean nor the Mexican banking crises have been completely resolved, it might be premature to carry out a comprehensive assessment of the effectiveness of the strategies and programs implemented in both countries. Instead, this section will briefly compare some of the main areas in which more progress is required to completely resolve the crises. This section will also assess the quality of the management of the crisis in terms of transparency of decision making, speed of reforms, and political and social obstacles faced in the resolution.

Assessing the Resolution of the Banking Crises in Terms of Speed of Reforms and Remaining Agenda

As shown in the following table, progress in Korea has been more substantial and rapid than in Mexico. Although initial responses for containing systemic risks were rapid in both countries, decision making and policy implementation in the other stages of banking crisis resolution have been faster in Korea than in Mexico.

Table 15
Assessing Progress to Resolve the Mexican and Korean Banking Crises

Main Goals of the Programs to Resolve the Banking Crises	Mexico (Dec. 94-June 99)	Korea (Dec.97-June 99)
Contain systemic risks, avoid bank runs and protect the payment system	3	3
Restore investors' confidence	3	3
Maintain banks' main role in allocating credit to the economy	0	3
Resolve non-viable banks	1	2
Restore the long-term solvency of the banking system	2	2
Restore the long-term profitability of the banking system	1	1
Sale acquired bad assets from ailing banks	0	1
Sale equity participations of government in the banking system	2	1
Establish an adequate framework for the efficient and sound development of the banking system	2	2
Total	14	18

0=no progress, 1=some progress, 2=significant progress, 3=completely achieved

Source: Bank staff estimates

To some extent, the speed of reforms has been the result of the strategies chosen and implemented in each country. In Korea, the rapid and realistic recognition of the magnitude of the banking sector problems has enabled banking authorities to rapidly restructure distressed banks. Furthermore, the rapid allocation of 64 trillion in public resources for bank recapitalization and purchases of NPLs was made possible by willingness to rapidly recognize losses and resolve problems.

In Mexico, the resolution of the crisis has been done on a gradual basis. The gradualist approach adopted in Mexico has been the result of the inability (or reluctance) of their authorities to rapidly and realistically recognize the magnitude of banks' losses. As a consequence, the recapitalization programs, the purchase of NPLs, and the different schemes to support debt restructuring have not been implemented on large scale basis as in Korea. Implementation has proceeded slowly, on several rounds, as required by the circumstances, and with limited impact.

Notwithstanding the notable progress of Korea and Mexico in resolving their banking crises, the agenda for completing the crises resolution remains large in both countries.

One of the most important pending tasks is to completely restore the solvency of their banking systems. As of June, 1999, the average capital adequacy ratios of commercial banks in Mexico and Korea was 16% and 9.5%, respectively. Although both indicators surpass the minimum 8% requirement, they are still insufficient to ensure the long term soundness of both banking systems. The enforcement of tighter loan classification rules, scheduled for year 2000 in both countries, will probably increase the amount of nominal NPLs and decrease the level of capital. It is estimated that Korean banks may need an additional injection of 10 trillion won (US \$8.3 billion) and Mexican banks at least 50 billion pesos (US \$5 billion) to meet the new loan classification standards alone. Also, in the case of Korea, banks' losses may increase as further corporate debt restructuring takes place. The decreasing, but still large amount of non-restructured debt of domestic corporations owed to domestic banks, which at the end of June, 1999 amounted to 200,000 billion won (or \$US 166 billion), is susceptible of being restructured.

In the case of Mexico, an important weakness of the overall resolution strategy is that the primary function of banks, namely the mobilization of resources towards the financing of productive investments and consumption, has been dramatically undermined since the beginning of the crisis. Bank lending in Mexico has declined by more than 60% in real terms since 1994. This has reduced the banks' main source of income preventing them to reestablish their solvency and profitability. Also, the rapid decline of bank lending has become a drag on economic growth, specially because small and medium size enterprises do not have access to international financing.

The rapid decrease in bank lending is, to a large extent, the result of the delay to improve the framework to protect and enforce creditors' rights which has discouraged banks to resume lending. As discussed above, the lack of an adequate bankruptcy law has also severely undermined the debt restructuring programs by discouraging even good borrowers to repay their loans, thus increasing the fiscal costs of the crisis.

Another area in which more progress is required in both Korea and Mexico is the sale and disposition of impaired assets acquired from ailing bank institutions. While Korea has already made some progress in selling and disposing more than 36% of the acquired assets, Mexico lags far behind, since assets sold as of June, 1999 represented only 1% of the total acquired assets.

Also, in the case of Korea more efforts are required to reprivatize or sell the governments' majority equity participation in 4 of the largest banks (Seoul Bank, Hanvit, Cho Hung Bank and

Korea First Bank) whose assets represent 50% of the banking system. In the case of Mexico, also more progress is needed to complete the liquidation of 7 commercial banks (Anahuac, Capital, Cremi, Interestatal, Obrero, Oriente, Union), and complete the sale of other 4 banks (Bancrecer, Atlantico, Promex, Inverlat, Serfin).

Table 16
Current status of the Mexican and Korean Commercial Banks
(Banks existing before the Crises)

Bank Restructuring	Mexico	Korea
Banks in which the government is the major shareholder	0	4
Banks waiting for liquidation (with injection of public resources)	7	0
Liquidated Banks	0	0
Banks merged or acquired by domestic bank	2	10
Banks with foreign partner (minority shareholder)	3	3
Banks merged to or acquired by foreign institution (majority shareholder)	3	1
Banks under special monitoring or pending resolution	5	0
Banks able to survive without major restructuring	4	6
Total	24	26

Sources: FSS and CNBV

Finally, more progress is needed in strengthening prudential regulation and supervision in Mexico as well as in Korea. In particular, Mexico needs to establish a prompt corrective action system, whereas Korea needs to strengthen its on-site and off-site supervision. Also, both countries need to grant autonomy to the supervisory agencies, improve domestic standards on corporate governance for financial institutions and encourage banks to continue improving their risk management capacity.

Assessing the Quality of Management of the Mexican and Korean Banking Crises

Following sections will compare the management of both crises in terms of transparency of decision making, and social and political obstacles faced for resolving the crisis.

Transparency of Decision-making

Overall, the management of the banking crisis in Korea has been much more transparent than in Mexico. As shown in table 17, key decisions such as the viability of institutions, the amount of NPLs bought from banks and the extent of fiscal support to banks have been made using a transparent framework with explicit criteria and procedures for decision making. Furthermore, decisions on the viability of banks have been taken with help of an independent committee. By using explicit and transparent procedures equally applicable for all institutions, market participants have perceived government's decisions as impartial and, as a result, the credibility of authorities has been strengthened.

Table 17
Transparency of Decision-making
Selected Decisions

Key Decisions	Mexico	Korea
Determine the viability of banks	0	2
Determine the amount of fiscal support for recapitalizing ailing banks	0	2
Determine the amount of NPLs to be purchased from ailing banking institutions	1	2
Determine which banks could sell NPLs	2	2
Total	3	8

0=discretionary, 1= partially transparent, 2=completely transparent

Source: Bank staff estimates

When compared to Korea, in Mexico there has been on average more scope for discretionary decisions. Important decisions such as the viability of banks or the amount of NPLs purchased from ailing banks has been determined on a case by case basis. In some cases, the lack of a transparent framework with specific explicit criteria and procedures for decision making has contributed to the perception that government has rescued bank's shareholders at the expense of taxpayers.

Main Social and Political Constraints

Two factors completely ignored in the recent literature on banking crises are the political and social constraints faced by policy makers to manage and resolve a crisis. Given the large magnitude of systemic banking crises, practically the whole process of crisis resolution, including the design of strategies and policies, the timing and sequence of reforms as well as the final outcomes, can be influenced by social and political constraints faced by policy makers.

The following table illustrates some of the most important constraints faced in Mexico and Korea for resolving their banking crises.

Table 18
Political and Social Constraints Faced by Mexico and Korea
for Resolving their Banking Crises

Constraints derived from:	Mexico	Korea
Political factors		
Weak government	No	No
Strong interest groups (bankers)	Yes	No
Strong labor unions	No	Yes
Parliament opposition	Initially no, but after July 97 yes	No
Strong opposition from public opinion	Yes	No
Social factors		
Unwillingness of borrowers to repay their loans	Yes	No
Deteriorating living standards during the years before the crisis	Yes	No

Source: Bank staff estimates

Clearly, each country has faced different types of constraints for managing and resolving their crises. In Korea, the most important constraint for the bank restructuring program has come from the labor unions which have opposed to the drastic staff cuts carried out by banks since the beginning of the crisis. Nonetheless, banks have been able to reduce their personnel by 30% since then. As shown in the table above, other than strong labor opposition, the government has been able to implement its bank restructuring reform program without any major constraint.

In Mexico, on the contrary, the government has faced much more constraints for resolving the banking crisis. Firstly, the government has had to face a powerful group of banks' owners, organized under the Mexican Association of Banks, one of the most powerful interest groups in Mexico. In fact, one of the main reasons as to why the Mexicans never considered the nationalization of their banking system through rapid dilution of private shareholders and rapid injection of fiscal resources to restore the soundness of banks (the Korean approach), was because of the fear that such a measure would erode domestic investors' confidence on their financial system. The huge capital flight that took place after the government nationalized the banking system in 1982 was a fact still present in the mind of government officials in charge of the banking crisis of 1994.

It is still questionable whether a rapid renationalization of the largest distressed banks, as has occurred in Korea, would have really provoked a loss of investors' confidence in Mexico. Do domestic investors really behave differently in each country? In Korea, the rapid nationalization of insolvent and weak banks has been one of the most important elements to restore confidence in the banking system by showing the government's determination to resolve it. The idea that domestic investors in Korea and Mexico behave differently is an interesting topic that can not be investigated in this paper.

The second major constraint to the government's scheme for resolving the Mexican crisis has come from the parliament's lower house. Until August 1997, the lower house had been dominated by the governments' political party. Under this context, any amendments to the laws required to facilitate the banking resolution process was guaranteed. However, since September 1997, the parliament's lower house is no longer dominated by the governments' party but by the opposition. Since then, almost no new amendment has been passed to facilitate the governments' strategy for banking resolution. In fact, Congress has initiated an exhaustive review of the whole process for resolving the banking crisis. As a result, some loan purchases by FOBAPROA have been declared illegal, since some loans were not eligible to be acquired by FOBAPROA. Furthermore, opposition has found that a significant of part of loans purchased by FOBAPROA belong to solvent domestic companies and households who, in the absence of an appropriate legal framework for loan recovery, stopped repaying their loans.

A third major constraint in Mexico has come from the banks' borrowers themselves, organized in "El Barzon". Given the inability of a large segment of borrowers to repay their loans due to the downturn on economic activity, increasing unemployment and rising interest rates, "El Barzon" has been able to organize small and medium size debtors across the country and articulate their demands for debt restructuring. This group has become one of the major obstacles for reforming the bankruptcy and foreclosure laws which would have made easier for banks to take possession of guarantees.

Finally, another major factor that limited the implementation of the program to resolve the Mexican banking crisis was the lack of public support to it. The different attitudes of the public opinion in Mexico and Korea could be attributed to the fact that the banking crises occurred in countries with two different records of economic performance and social development. In the case of Mexico, the 1994 crisis was the third major economic crisis since 1982. Furthermore, as a result of those recurrent crises and overall poor performance of the Mexican economy, living standards had dramatically declined over this period with real wages falling by more than 50% since then. In Korea, on the contrary, the 1997 crisis was the first economic downturn experienced by the country over the last 30 years. Moreover, Korea's record of economic performance had been outstanding with an average annual GDP growth of 8% over the last three decades which enabled it to improve living standards within a short period of time.

CONCLUSIONS

Systemic banking crises reflect not only macroeconomic imbalances of a country, but also structural weaknesses in the incentive framework of the financial sector itself, such as inefficient management, poor market discipline, poor prudential regulation and supervision, weak bankruptcy laws, ineffective judicial systems, lack of transparency and disclosure of information, weak corporate governance and a poor credit culture. Moreover, as shown in the case of Korea, a banking crisis may reveal structural weaknesses in the productive structure of a country or, even worst, it may be just a symptom of a much larger problem caused by the obsolescence of a development model.

Given the large magnitude and multiple causes of a banking crisis, the resolution of a crisis is a complex process. It depends on a wide set of factors including the pace of macroeconomic recovery of a country, rapid and realistic recognition of banks' problems, proper linkages between bank recapitalization and debt restructuring programs, and rapid resolution of insolvent and weak banking institutions. Furthermore, success to resolve a crisis will also depend on the institutional capacity of the government to manage it, the sequence and timing of policy implementation, the willingness to reform and implement painful and unpopular measures, and the social and political constraints faced by decision makers.

As discussed in this paper, Mexico and Korea have adopted two different strategies for resolving their banking crises. Mexico has adopted a "gradualist" approach with slow progress in almost all stages of crisis resolution. To a large extent, the Mexican strategy has been determined by the inability (or reluctance) of their authorities to rapidly recognize the magnitude of banks' problems at the early stages of the crisis. Unsurprisingly, the measures and programs implemented to resolve the crisis have provided temporary relief to banking institutions, but they have failed to rapidly address the causes of the banks' problems and restore the soundness and profitability of banking institutions.

Before intervening or restructuring a bank, Mexican bankers have been given enough time and incentives to recapitalize their institutions or, alternatively, find other domestic or foreign investors capable of injecting the required capital. Recapitalization with public resources has been seen as the last policy option. However, given the adverse market conditions faced by the

Mexican economy during the crisis, the injection of additional capital into the banking system has been slow and insufficient.

Also, several programs have been established by the CNBV to support domestic debtors, both large corporations and households, to repay their loans. However, the impact of those programs has been limited. In fact, since the government has extended those programs several times during the last five years without establishing a framework for the rapid collection and foreclosure of guarantees of defaulted borrowers, even solvent borrowers have become reluctant to repay their loans.

In addition, a special program was established for removing bad assets from banks through purchases of non-performing loans (NPLs) by the Fund for the Protection of Bank Savings (FOBAPROA). Purchases of NPLs have taken place several times during the last five years. As in the case of the debtors' programs, the large part of the costs of these transactions have been assumed by the government, not by the banks' shareholders. As a result, the amount of fiscal resources allocated to support the resolution of the banking crisis has rapidly increased over the last five years. At the end of September, 1999 the fiscal cost of the crisis amounted to US \$104 billion or 19.3% of Mexico's GDP.

The overall slow progress in the resolution of the Mexican banking crisis lies not only in the limited impact of implemented policies, but also in the poor integration of the policies themselves under a comprehensive strategy to resolve the crisis. The debt restructuring programs are perhaps the most notable case of lack of policy coordination. These programs, originally conceived as a one-time support to help debtors to repay their loans, have been extended several times during the last five years. However, since those programs were implemented without establishing a framework for the rapid collection and foreclosure of guarantees of defaulted borrowers, even solvent borrowers have become reluctant to repay their loans. At the end, the frequent extension of debt restructuring programs ended up discouraging good borrowers from repaying their loans, exactly what those programs were trying to prevent.

Korea has relied on a much more aggressive program for resolving the banking crisis. Recognition of losses at the early stages of the crisis and willingness of the government to rapidly resolve the crisis led to the establishment of once-for-all solutions. As a result, small insolvent institutions were rapidly shut-down, remaining distressed banks were practically nationalized, and a large part of bad assets was rapidly removed from banks in one-time transactions. In addition, the main instrument for bank recapitalization has been the injection of government resources, instead of private funds, as in the case of Mexico. Under this scheme, major Korean banks have been practically nationalized, and the government has become the owner of more than 75% of the banking system in terms of banks' capital.

Another factor that distinguishes the Korean from the Mexican strategy is the fact that recapitalization of banks with public resources and the purchase of NPLs have been one-time transactions (in a few cases two-time transactions), not several as in Mexico. Those transactions have been funded by a one-time allocation of fiscal resources of 64 trillion won (US \$ 54 billion dollars or 15% of GDP) in September, 1998. By limiting the number of bank recapitalizations and purchases of NPLs, moral hazard problems have been avoided in Korea.

Unlike Mexico, Korea has been able to avoid the socialization of debtors' losses, since it has succeeded in establishing adequate mechanisms to force solvent borrowers to repay their loans. Direct subsidies for corporate debt restructuring have been avoided in Korea. In addition, banks were forced to assume the costs of debt work-outs, whereas in Mexico they were borne to a large extent by the government.

In comparison to Mexico, Korea has succeeded in rapidly selling those bad assets acquired KAMCO. However, unlike Mexico, Korea has failed to sell the nationalized banks to domestic or foreign investors.

Based on the analysis carried out in this paper, there are 10 lessons that can be drawn from the management and resolution of the Mexican and Korean banking crises.

1. **There is no single approach for managing systemic banking crises.** What works in one country does not necessarily work in others. It is difficult to imagine how the Korean approach to manage and resolve a crisis could be replicated in countries where social discomfort is widespread, large debtors rapidly organize and stop repaying their loans, governments are weak and not supported by parliament, there is no room in the existing public debt to allocate 15% of GDP for financing bank restructuring, and macroeconomic recovery does not occur rapidly.
2. **A centralized crisis management unit, with extraordinary powers and adequate budgetary and human resources, is essential for the successful management and resolution of a banking crisis.** To a large extent, the resolution of a banking crisis is a managerial problem. Regardless of the strategy and policies chosen for resolving a crisis, the successful resolution of a crisis depends on the ability of a government to deliver rapid and sequenced responses, remove legal and administrative obstacles, create consensus around a strategy and its policies, implement unpopular measures, coordinate involved agencies and market participants, and resist opposition from affected interest groups. Therefore, a centralized unit with wide powers, adequate budgetary and human resources, a clear mandate to resolve a banking crisis seems to be the ideal institutional arrangement required for managing a crisis.
3. **Use of private sector experts on financial restructuring is essential to speed up the resolution of a banking crisis.** Governments in general do not have the adequate expertise to carry out sophisticated financial restructuring operations required for restructuring a banking system. In particular, governments lack expertise in the areas of due diligence, asset management and disposition, privatization of banks, mergers and acquisitions, and debt restructuring. Therefore, the use of private sector experts in financial restructuring can significantly contribute to resolve a crisis.
4. **A rapid and realistic recognition of banks' problems is a necessary precondition for establishing an adequate strategy to resolve a crisis.** Failure or reluctance to rapidly and realistically recognize the magnitude of banks' losses at the early stages of a crisis will likely lead to the prescription of measures which may provide short-term relief, but fail to address

the underlying causes of the crisis. In addition, if losses are not timely recognized, many technically insolvent banks may be allowed to stay in the market and even kept artificially afloat through fiscal support.

5. **Decisions on the viability of banks should be made on a transparent basis and, to the extent possible, validated by independent experts.** In order to maximize impartiality of government's decisions, explicit criteria should be established to judge and determine the viability of a financial institution, using the same criteria and procedures to the largest number of banks. Decisions should also be validated by a group of independent experts. As shown in the case of Mexico, discretionary decisions made on case by case basis may undermine the credibility and impartiality of financial authorities.
6. **An overall strategy that links all policies and programs towards the accomplishment of a coherent set of goals is crucial for the successful resolution of a banking crisis.** In a crisis environment, it is not a surprise that pragmatism and *ad hoc* responses may prevail over strategic thinking. In fact, the urgency for rapid responses may not allow time for prolonged deliberations. However, in the long run, the lack of a minimum medium and long-term strategy to resolve a crisis may be counterproductive. As shown in the cases of Mexico and Korea, failure to implement policies in a sequenced basis may produce poor or even contradictory results. A rapid and large-scale recapitalization of banks, for example, may result insufficient if it is not properly linked to significant progress in improving borrowers' capability and willingness to repay.
7. **In cases of deteriorating social conditions, enforcement of creditors' rights may be neither politically nor socially feasible.** As shown in the case of Mexico, the enforcement of creditors' rights at any cost is not always possible, especially when social discomfort provoked by a crisis is large. However, unjustified delay in enforcing creditors' rights and allowing rapid repossession of collateral may be counterproductive. If banks' can not rapidly and easily take possession of collateral, even solvent borrowers will become unwilling to repay their loans.
8. **Appropriate sequence of policies is as important as the policies themselves.** Debt restructuring programs should not be established before a strict framework for repossession of collateral is in place. As shown in the case of Mexico, in the absence of a framework to protect creditors' rights rapidly, the impact of debt restructuring programs may be limited. Even good borrowers may become unwilling to repay their loans when they are not forced to do it. The success of programs to recapitalize banks, remove bad assets from banking institutions, restore a payment culture, sell NPLs, may be undermined if creditors' rights can not be enforced and banks' can not rapidly execute collateral.
9. **Keeping insolvent banks artificially afloat is always an expensive decision.** As shown in the case of Mexico, even with a strong and rapid macroeconomic recovery, and large injections of private and public resources, insolvent banks have not been (and probably will not be) able to survive. By keeping insolvent banks artificially afloat, the (fiscal) costs of a crisis have skyrocketed. Time and economic recovery do not necessarily improve the financial situation of technically insolvent banks.

10. **One (or two) large injection(s) of public funds may be more effective than gradual (several) doses.** Repeated use of fiscal resources to recapitalize banks, purchase non-performing loans and support debt restructuring might be counterproductive if banks and debtors perceive that the government will likely continue to assume banks' losses. As shown in the case of Mexican debtors, even solvent debtors may become reluctant to repay their loans if they perceive that at the end the government will likely assume banks' losses and rescue debtors.

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NOTES

¹ As noted by T. Balino (1999), in mid-1997, IBCA awarded a legal rating of 2 (next to the highest) to 11 of the 16 commercial banks in Korea, explicitly considering these banks as “too big too fail”.

² In Korea, commercial banks operate trust accounts which are maintained separately from their banking accounts. Trust accounts have been commonly used to circumvent regulations, because they are not subject to the same prudential and supervisory standards as normal banking business such as credit exposure limits or provisioning rules on loans.

³ In Korea a loan was classified as non-performing loan (NPL) after it had been in arrears for six months or more. Bad loans were defined as the portion of non-performing loans not covered by collateral. Banks were required to set up provisions for loan losses at the end of each fiscal year sufficient to cover 100 percent of expected losses. However, losses were not expected to be over 2 percent of total loans. For that reason, loan loss reserves over 2 percent were not tax deductible, thus discouraging banks from provisioning in excess of 2 percent. Furthermore, loan classification and provisioning rules for loans in trust accounts were non-existent. In July, 1998, loan classification standards were modified. Accordingly, a loan is classified as non-performing after three months in arrears. In Mexico, the old system of loan classification, mainly based on repayment history rather than borrowers' present and future capability to repay as in Korea, was replaced in January 1996 with a system closer to the US standards. Also, in March 95, CNBV issued new provisioning rules requiring banks to increase reserves for loan losses to the highest of: (i) 4% of total loan portfolio; or (ii) 60% of past due loans.

⁴ Kim (1998) argues that, in spite of the deregulation of interest rates, banks still do not have the liberty of determining rates. If they try to increase rates rapidly, pressures from political or commercial communities are formed to block such a movement. The idea of recognizing bank as profit-seeking private enterprises rather than public entities is still unfamiliar to the Korean public. Rate discriminations between customers based on credit quality and contribution to the institution are treated as unfair, making cross-subsidization between customers a common practice in Korea.

⁵ A comparison of the origins of and policy responses to the currency crisis in Mexico and East Asian countries can be found in: Edwards Sebastian (1999).

⁶ The process and criteria for evaluating loans was adjusted so that guarantees and collateral were considered in the evaluation process. This resulted in lower required reserves. See Michael W. Mackey (1999).

⁷ In 1999 FOBAPROA was reorganized and transformed into the Instituto de Proteccion al Ahorro Bancario (IPABE) a formal deposit insurance agency responsible now for any injection of new capital into the banks.

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