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Financial Crises in the 1990s in the Light of Financial Regulations

Finansal Regülasyonlar Işığında 1990'lı Yıllarda Yaşanan Finansal Krizler

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1990'lı yıllarda dünya ekonomisinde yaşanan finansal krizler, finansal düzenleme tartışmalarını da beraberinde getirmiştir. Bu bağlamda, bu çalışma finansal düzenleme başarısızlıklarının finansal krizlerdeki rolünü ülke deneyimlerinden yola çıkarak analiz etmektedir. İskandinavya, Meksika ve Doğu Asya krizlerini finansal düzenleme çerçevesinde analiz eden çalışma, krizlerin sonuçları ve çözüm süreçleri üzerinde durmaktadır. Çalışma, düzenleme başarısızlıklarına yol açan faktörlerin ülkeler arasında farklılaştığını ortaya koyuyor. İncelenen ülkelerde düzenleme başarısızlıklarının ahlaki tehlike sorunlarına ve rant kollama faaliyetlerine yol açarak finansal krizlere zemin hazırladığı tespit edilmiş, düzenleme başarısızlıklarının bilgi ve tecrübe eksikliği ile ekonomik güçlerin düzenleme süreci üzerindeki manipülasyonundan kaynaklandığı sonucuna ulaşılmıştır.

ABSTRACT

The financial crises that occurred in the world economy during the 1990s brought along the financial regulation debates. In this context, this study analyzes the role of financial regulatory failures in financial crises based on country experiences. The study analyzes the Scandinavian, Mexican and East Asian crises within the framework of financial regulation and emphasizes the consequences and resolution processes. The study reveals that the factors that led to regulatory failures differed across countries. In the countries analyzed, regulatory failures have been found to pave the way for financial crises by causing moral hazard problems and rent-seeking activities, and it is concluded that regulatory failures are caused by a lack of knowledge and experience and the manipulation of economic forces on the regulatory process.

1. Introduction

The pre-1980 period was characterized as a period in which many countries kept their financial systems under pressure through intensive regulation. Financial markets served as a tool for maintaining macroeconomic stability and financing budget deficits rather than for the efficient allocation of resources in economies. Accordingly, monetary policy instruments and government-guaranteed external borrowing were used to provide credit supply for state budgets and public sector firms. Credit allocations were made through state-owned banks at below-market interest rates. Deposit

interest rates were kept at low levels to lower the cost of credit. Capital controls were used to prevent potential capital flight due to low interest rates and macroeconomic instability. However, tight control of financial markets led to many inefficiencies. Limited mobility of capital and inefficient allocation of financial resources led to slower economic growth. Political pressures led financial institutions to continuously renew non-repayable loans until the value of the loan was zeroed out by inflation. Lack of prudential regulation and high inflation despite low interest rates on deposits helped financial institutions to hide credit

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losses (The World Bank, 2005).

As seen in Figure 1, the inadequate - from a prudential perspective - regulations implemented in the pre-liberalization period served the purpose of profit padding for institutions operating in the financial sector. Under profit-padding regulations, loans were more costly for potential borrowers and returns on savings were lower for depositors. On the other hand, the increase in the profits of financial institutions through regulation indirectly contributed to the implementation of prudential credit policies (Rosenbluth and Schaap, 2003).

Figure 1. Competition and Prudential Outcomes, Expected Outcomes

Prudential Regulation	High	I. Excessive Protection	II. Competitive Regulatory Environment
	Low	III. Profit-Padding Regulation	IV. Moral Hazard Danger
		Low	High
		Level of Competition	

Source: Rosenbluth, F. & Schaap, R. (2003).

Since the second half of the 1980s, the increased access to international capital markets, especially in parallel with the developments in communication technology, led to a decline in the effectiveness of capital controls. As the targeted growth rates could not be achieved through financial repression and pressures for globalization increased, many countries started to liberalize their financial markets (The World Bank, 2005).

With the increase in competition as a result of financial liberalization, financial institutions, whose profits and franchise values declined, found the remedy in turning to imprudent lending policies (Thomas et al, 2000). The institutional reforms required to create a competitive regulatory environment in financial markets were not preferred due to their high costs, leading to moral hazard problems. Weak prudential regulation allowed financial institutions to operate with high leverage, leading to increased fragility in financial systems.

As a result of perceiving financial liberalization only as the removal of controls on financial markets and neglecting institutional reforms, financial crises occurred at different times and in different magnitudes in many countries throughout the 1990s.

Several significant financial crises occurred worldwide in the 1990s. The crisis that occurred in 1990-1991, known as the Currency Crisis, affected many Latin American countries. The external debt problems of many Latin American countries that started in the late 1980s led to a currency crisis that erupted in the period of 1990-1991. Argentina, Brazil, Mexico, and many other countries

experienced currency crises as they became unable to repay their debts. The effects of this crisis manifested themselves at different times in these countries, deepening over time. These crises were the result of problems arising from various factors in the economic and financial systems in the region. Mexico experienced a financial collapse in 1994. Problems such as the devaluation of the peso, increasing external debt, and high inflation affected the country (Perng, 2022). The Mexican government tried to control the crisis through international assistance and austerity policies (Hoyos, 2021). Argentina faced a severe economic crisis in 1999. High public debt, declining export revenues, bank failures, and unemployment affected the country. As a result of the crisis, Argentina suffered a major blow in terms of economic growth and social stability (Roberts, 2017). Brazil experienced a financial crisis in 1999. Factors such as increasing external debt, declining export revenues, and depreciation of the currency, the Real, plunged the country into significant economic uncertainty and volatility. The Brazilian government tried to control the crisis through financial support and austerity policies. These crises emerged as a combination of factors such as economic vulnerabilities, financial problems, high debt levels, trade imbalances, speculative capital flows, and international financial fluctuations in Latin American countries (Roberts, 2017). These crises led the countries in the region to reassess their economic policies and embark on structural reforms. Some countries strengthened financial supervision and regulations, improved debt management, and received assistance from international financial institutions to ensure stability.

Among these three crises, the Mexican crisis stands out more prominently in this study. The first reason is that it was the first financial crisis to occur in Latin America during the years when financialization began. Additionally, the resolutions of the Brazil and Argentina crises took place in the 2000s, while this study aims to focus on the financial crises of the 1990s. Another reason is that the financial sector was the most affected sector in the Mexican crisis. In Brazil, not only the financial sector but also private companies and the export sector were affected, while in Argentina, the public sector was also affected. Therefore, it would not be suitable for this study, which is based on the financialization period.

When we look at the financial crises in Europe in the 1990s, we can observe the Russian, Turkish, and Scandinavian crises. The Russian crisis of 1998 was primarily triggered by a sudden and significant drop in oil prices, leading to a sharp decrease in the country's income, inability to cover public expenditures, and weaknesses in the banking system, which in turn resulted in a decline in the value of the Ruble (Pinto and Ulatov, 2016). Additionally, high external debts and decreasing foreign trade revenues due to the falling income contributed to imbalances in the international balance of payments, further exacerbating the crisis (Pretorius and Beer, 2014).

The Turkish crisis of 1994, on the other hand, emerged primarily as a result of misguided economic policies implemented in the country. In 1994, Turkey faced pressures on its exchange rate due to the overvaluation of the Turkish lira. Foreign exchange reserves decreased while the demand for foreign currency increased. As a result, the government devalued the Turkish lira in July 1994 to address the situation. The 1994 Turkish crisis was a financial turmoil triggered by the deepening economic and fiscal problems in the country. This crisis prompted Turkey to reassess its economic policies, implement structural reforms, and collaborate with international financial institutions.

Turning to the Scandinavian crisis, in the late 1980s and early 1990s, real estate prices experienced significant increases in Scandinavian countries. This was supported by banks providing easy credit and the public's inclination towards borrowing (Englund, 2015). Scandinavian banks extended large amounts of credit to finance the real estate bubble. Banks particularly emphasized risky loans in the commercial real estate sector and relaxed credit standards. As a result of credit expansion, Scandinavian banks faced weaknesses such as insufficient capital and high credit risks. Furthermore, many banks started using risky financial instruments and derivative products to increase profitability (Grenet, Grönqvist, Jahnsen, 2022).

When comparing these three crises, the Russian crisis was driven by a sudden drop in oil prices, while the Turkish crisis emerged due to misguided economic policies. Moreover, these two crises were mostly characterized as local crises that resulted from the implementation of domestic policies and the lack of appropriate actions during that period. In contrast, the Scandinavian crisis was distinguished by the financial liberalization period that began in the late 1980s, affecting multiple countries and differing from other crises in terms of the implemented solutions. Thus, this study extensively examines the Scandinavian crisis considering these developments, the involvement of multiple countries, and the applied solutions, which differentiate it from other crises worldwide.

The East Asian Financial Crisis, which occurred between 1997 and 1998, was a crisis that affected countries in East Asia such as Thailand, Indonesia, South Korea, Malaysia, and the Philippines. This crisis was characterized by financial market collapses, currency depreciations, and economic downturns. Among the main causes of the East Asian Financial Crisis were insufficient financial regulations and supervision. During this period, as capital movements liberalized and external borrowing increased, regulatory measures in the financial systems proved to be inadequate. Banks and other financial institutions provided risky loans, leading to increased levels of debt and investments in risky ventures (Benmelech & Dvir, 2014).

Insufficient regulations and supervision weakened the stability and resilience of the financial systems. Banks increased their borrowing levels, their financial structures weakened, and risky assets accumulated. This situation

accelerated and deepened the spread of the financial crisis. East Asian countries' currencies experienced significant depreciations during the crisis. Currency crises further deepened the financial and economic problems of countries with external debts. Currency depreciation led to the increased cost of imports and a rise in external debts.

The East Asian Financial Crisis had a significant impact on international financial markets. The crisis created a panic in global capital flows and negatively affected the financial markets of other countries. Investors' confidence in East Asia declined, leading to an acceleration of capital outflows. Following the crisis, many East Asian countries implemented significant reforms in financial regulations. Measures such as regulating the banking sector, strengthening risk management practices, and implementing capital controls were taken. These reforms strengthened the financial systems, reduced risks, and made them more resilient to future crises. The East Asian Financial Crisis marked an important turning point for the region and drew the attention of the international community to the importance of achieving financial stability, strengthening regulations, and managing risks (Kohler, 2010).

The main objective of this study is to evaluate the relationship between financial regulations and financial crises in light of the different financial crises that occurred in various regions of the world during the late 1980s and early 1990s, coinciding with the emergence of financialization. The selection of the period in which the analyzed crises occurred is based on the recognition of the effects of the global wave of financial liberalization on financial markets in the 1990s. The dynamics of the crises, the degrees of impact of regulation and regulatory problems on the crises, and crisis resolution mechanisms have formed the criteria for our country preferences. In light of the information provided above, the Scandinavian crisis, the Mexican crisis, and the East Asian crisis stood out as prominent crises for examining the relationship between financial regulations and financial crises. In the continuation of the study, each crisis will be analyzed in detail within the framework of financial regulations, emphasizing the importance of the role played by financial regulations in financial crises.

2. The Nordic crisis

The Scandinavian banking crisis, which occurred in Finland, Sweden, and Norway in the early 1990s and was the first systemic banking crisis experienced by developed countries since the 1930s, is a financial crisis characterized by a cycle of sudden expansion and contraction, resulting from a combination of financial deregulation, fixed exchange rates, high mobility of capital and negative shocks (Sandal, 2004). The deregulations carried out simultaneously with expansionary macroeconomic policies have been the main factor that played a role in the crises. In addition, other factors that contributed to the occurrence of crises were the policy interventions of public authorities that were restricted

or delayed due to the commitment to fixed exchange rates, the structural features of financial systems, the inadequacy of endogenous risk management and the incentives provided by public authorities in the absence of strong prudential regulations, which created expectations that could lead to moral hazard (Drees and Papazoglu, 1995).

As early members of the Bretton Woods system, Finland, Norway and Sweden were characterized as well-organized countries with financial stability until the financial liberalization process. In addition to pegging their currencies to the dollar, the countries had extensive capital controls or exchange controls. While capital controls kept these countries out of the international financial arena, they allowed for the implementation of interventionist and selective monetary and fiscal policies domestically. Monetary policies were implemented to subsidize the sectors that governments wanted to support with low interest rates and a large supply of credit.

Prior to the financial liberalization process, the financial systems of the Nordic countries were dominated by banks. The stability of the banking system was secured by intensive regulations. In addition to the stability of the system, other objectives of the regulations were to maintain low interest rates and channel subsidized loans to priority sectors such as the housing sector.

Countries' low interest rate policies were justified by the fact that housing loans and long-term capital were more sensitive to interest rates than consumer loans. In other words, there was concern that high interest rates would lead to a crowding-out effect for investments in priority sectors.

In addition to limits on lending rates, there were also limits on deposit rates. In Finland, deposit interest rates were tightly controlled until the early 1990s. In Norway and Sweden, on the other hand, interest rates remained low despite the lifting of restrictions on deposit rates in the late 1970s. This was also an indication of the limited competition in the banking system.

Interest payments on deposits made by banks to households were exempt from income tax. Tax exemptions on interest payments on deposits helped deposit banks reduce their cost of fundraising and gain competitive advantages over other institutions in the financial system. The fact that all banks offered low interest rates on tax-exempt deposits encouraged banks to enter into cartel-like agreements and reduced competition for private funds.

Since balanced credit flows at low interest rates required extensive government intervention to prevent excessive credit expansion, credit levels were kept low, in some cases by direct quantity restrictions and in others by reserve requirements and liquidity ratios. Restrictions on bank lending were supplemented by central bank funding quotas and controls on short-term capital flows to discourage foreign currency borrowing.

Although the overriding objective was stability in financial

systems, capital adequacies were low and, in some cases, not applied restrictively (Drees and Papazoglu, 1995). In 1983, before financial deregulation, the shares of capital and reserves in the total balance sheet of commercial banks in Norway, Sweden and Finland were 5%, 6% and 7%, respectively (Stegium, 2004). However, the quality of capital was also low due to the high share of subordinated debt in total capital.

The chronic demand for credit, which increased as a result of interest rate and quantity limits on loans, led banks to establish close and long-term relationships with potential borrowers. While the client-based banking system allowed banks to be very selective in choosing safe credit risk and to maintain low provisions for loan losses, it led to decentralized credit decisions and poor credit risk management and encouraged cross-subsidization among various banking services. Greatly restricted competition among banks and favorable tax exemptions guaranteed their profitability (Drees and Papazoglu, 1995).

By the end of the 1970s, market forces found many ways to circumvent interest rate restrictions and regulatory authorities were unable to protect financial systems. Interest rate and quantity restrictions on credit, together with high inflation, increased the incentives for segregation in the regulated parts of financial systems. In this context, economic agents turned to unregulated gray markets, where lenders and borrowers directly face each other, with unimpeded profit opportunities as predicted by the Market Process Theory of Regulation.

Financial institutions, whose efficiency declined with the development of gray markets, also participated in unregulated credit markets through off-balance sheet activities. The increased interest in the rapidly growing unregulated markets led public authorities to relax some controls in order to attract the unregulated sector into the traditional banking system.

In the second half of the 1980s, Norway, Sweden and Finland initiated financial liberalization processes. First, quantity and interest rate restrictions on loans were removed. Domestic credit and capital markets were liberalized. Faced with additional reserve requirements, banks turned to other credit channels, which contributed to the rapid growth of financial firms not subject to reserve requirements, leading to the abandonment of reserve requirements altogether. Foreign exchange and capital controls, which had been gradually reduced, were completely abolished in the early 1990s. Foreign banks were allowed to operate domestically through subsidiaries in order to open the financial system to foreign competition (Drees and Papazoglu, 1995).

The process of financial liberalization was followed by a similar process of economic expansion in all three countries. Domestic demand was strongly influenced by large increases in trade resulting from lower energy prices and higher prices of export products on world markets. Private

consumption grew rapidly, in line with increases in employment and income. These initial effects contributed to the overheating of the economy already triggered by deregulation (Honkapohja, 2009).

As a result of the credit boom with financial liberalization, the channeling of loans to asset markets increased asset prices. Higher asset prices increased the value of collateral, making it easier to borrow (Chen, Jonung and Unteroberdoerster, 2009). Loan demand increased as borrowers' net worth increased, and loan supply increased as collateral values increased. The rise in asset prices led to significant increases in leverage ratios (Mai, 2008). The private sector used rising asset prices as collateral to absorb more debt. Strong growth in disposable income combined with low and declining unemployment further increased borrowing tendencies.

Inflation and inflationary expectations rose further during the asset market boom. To support households' and firms' demand for loans, real after-tax interest rates were reduced to zero or negative levels (Chen, Jonung and Unteroberdoerster, 2009). In addition, generous tax deductibility rates for interest payments on housing and consumer loans made access to credit easier. The lifting of exchange controls created new opportunities for firms to borrow from banks at low interest rates in foreign currency (Drees and Papazoglu, 1995). Nominal debt of the private non-financial sector increased by 87% in Finland, 67% in Sweden and 52% in Norway in the 5 years after financial liberalization (Mai, 2008).

With the removal of quantity and interest rate restrictions on loans, competition for market shares among financial institutions increased. Prior to financial liberalization, institutions affected by regulations such as banks increased their market shares with deregulation, while finance and insurance companies, which made large profits thanks to regulatory arbitrage, rapidly lost their market shares (Englund, 1999).

Interest rates were used as a strategic variable in the competition between banks. Although banks increased interest rates on deposits, they did not raise interest rates on loans to appropriate levels. The risks of credit expansion caused by competition were compensated with high-cost funds obtained from money and foreign exchange markets. While the ratio of bank deposits to total assets declined, the ratio of funding from the money and foreign exchange market and bank funding costs increased. In addition, banks extended these high-cost funds in the form of FX-denominated loans to cyclical sectors such as real estate, construction and services, further increasing the risk in their loan portfolios.

The combination of financial liberalization, expansionary macroeconomic policies and government incentives led banks to take more risks in a competitive environment. The "no-bank-will-fail policies" of governments and the declining franchise values of banks as a result of falling rents

exacerbated the problem of moral hazard. In addition, economic euphoria and myopia due to rising asset prices and strong economic growth, changing bank-customer relationships, and underestimation of the increased risk due to the riskiness of asset-based borrowing triggered banks' behavior that resulted in excessive risk-taking.

The response of public authorities to the unsustainable growth in the financial and real sectors was inadequate in many respects. Regulators failed to enforce prudential banking regulations, which should have been strictly enforced during the liberalization process. Banks' lending activities and their already weak risk management were not scrutinized in depth. Moreover, in Norway and Sweden, banking supervision and oversight agencies were merged with insurance supervision and oversight agencies at the height of bank credit expansion, and emerging capital markets were given more attention than banking markets. As a result of the increase in document-based supervision, the frequency of on-site inspections decreased significantly. In Finland, direct controls and on-site inspections of savings and cooperative banks were left solely to the responsibility of the banks' own supervisory authorities (Drees and Papazoglu, 1995).

The expansionary business cycle in the Nordic economies began to reverse in the late 1980s as a result of a combination of exogenous and endogenous shocks. Norway, an oil exporter, was the first country to experience an economic contraction due to the oil shock in 1986. The current account, which had posted a surplus of 4.8% of nominal GDP in 1985, fell to a deficit of 6.2% in 1986 as a result of the sharp fall in oil prices. This put pressure on Norway's currency, the krone, which was eventually devalued in May 1986. However, the declining credibility of the fixed exchange rate policy due to the multiple devaluations of the domestic currency between 1977 and 1986 led to interest rates being set at high levels to sustain the fixed exchange rate regime during the recession of the late 1980s (Vale, 2004).

In Finland and Sweden, it became increasingly clear towards the end of the 1980s that the upward trend in asset prices, which had been sustained by high inflationary expectations and expansionary macroeconomic policies, would not continue much longer. Accordingly, tax reforms coupled with tight monetary policies and low inflation led to a sharp decline in asset prices by increasing after-tax real interest rates (Drees and Papazoglu, 1995).

The common shock that hit Norway, Finland and Sweden was the increase in interest rates as a result of the contractionary German monetary policy after the unification of East and West Germany in 1990. The rise in interest rates in Germany put upward pressure on domestic interest rates in the Nordic countries, whose currencies were pegged to the German mark (Chen, Jonung and Unteroberdoerster, 2009).

The large increase in interest rates had a profound impact on

the balance sheets of the private sector. The decline in the real value of assets due to increases in real interest rates led to asset price deflation. Balance sheets became more fragile when asset prices, especially in the housing sector, fell below collateral values (Jonung, 2009). The private sector's payment difficulties led to a sharp increase in non-performing loans, and the increase in loan losses quickly led to a banking crisis.

In September 1992, the international currency crisis erupted, transforming banking crises into currency crises. As a result, the Scandinavian countries, which had previously pegged their national currencies to the European Currency Unit (ECU), abandoned the fixed exchange rate one after the other. Finland in September 1992, Sweden in November 1992 and Norway in December 1992 (Jonung, 2009).

The Scandinavian banking crisis resolution is considered to be the most successful crisis resolution exercise in history (Anderson, 2009). Despite failures to implement strong prudential regulations in the pre-crisis period, system-protective regulatory tools were used effectively during the crisis and in the post-crisis period. Although governments in all three countries played an active role in the resolution of the crises, different resolution methods were used (Sandal, 2004)

In Finland, the first policy responses to banking crises began with the nationalization of Skopbank - the central bank of savings banks - in September 1991 (Honkapohja, 2009). The nationalization of Skopbank was clearly an ad hoc solution. But the lack of an alternative authority to manage the situation at the time forced the central bank to inject capital. Subsequently, the Finnish government took a more systematic approach to the problems in the banking sector and all political parties tried to reach a consensus in the management of the crisis (Sandal, 2004).

The use of systematic policy instruments in the fight against the crisis started in the first months of 1992. The government injected public funds into the banking system in the form of preferred capital certificates and established the Government Guarantee Fund (GGF) to manage the crisis. Strict conditions were imposed on the banks that received public support. If the banks failed to meet the conditions for repaying their debts, the preferential capital certificates were converted into voting stocks. Moreover, the interest rates on the certificates were above market interest rates. Accordingly, the GGF's operations were subject to conditions such as transparency of the support, supervision of the supported bank, structural adjustments in the banking system and, to varying degrees, the responsibility of the owners of the supported banks.

As the crisis continued, the government in August 1992 and the parliament in early 1993 promised that the liabilities of the banking system would be guaranteed under all circumstances. Increased efficiency in the banks was achieved by reducing the number of branches and staff. From 1990 to 1998, the number of staff working in the sector

was almost halved. Most of the 250 savings banks were merged into the Savings Bank of Finland (SBF) in June 1992. SBF's non-performing loans were transferred to Arsenal, an asset management company owned by GGF, using the clean bank approach in purchase and assumption arrangements.

The banking crisis in Sweden began in the fall of 1991 when Första Sparbanken, the country's largest savings bank, experienced insolvency. As in Finland, temporary solutions such as liquidity injections and loan guarantees to bank owners were used to overcome the financial difficulties in Sweden until the summer of 1992. In the fall of 1992, when the crisis became systemic, more comprehensive instruments were used. Blanket creditor guarantees were issued by the government. Riskbanken, the Swedish central bank, provided intensive liquidity support to the banking system. The crisis resolution agency Bankstödsnämnden (BSN) was established to provide state support to the banking system. This institution was open to all banks in the system and similar criteria were established for different banks. Measures were taken to increase efficiency and reduce costs and risks.

The banking crisis in Norway began when Sunnmørsbanken, a medium-sized commercial bank, suffered large loan losses in the fall of 1988. Shortly afterwards, two savings banks also got into financial trouble and in 1989-1990 many savings banks suffered large capital losses. First, special funds, the Commercial Banks Guarantee Fund (CBGF) and the Savings Banks Guarantee Fund (SBGF), provided support to the distressed banks and then helped the troubled banks merge with other banks.

By the end of the 1990s, the private guarantee funds had used up most of their resources and the government established the Government Bank Insurance Fund (GBIF) in January 1991 with a capitalization equivalent to 0.6% of GDP. Initially, the GBIF provided additional liquidity support for private funds. But later, as the banks' distress continued, direct support for troubled banks became mandatory. In the fall of 1991, the country's largest commercial bank, Den norske Bank, lost 90% of its equity capital, and the second and third largest commercial banks, Christiania Bank and Fokus Bank, lost all of their capital. The GBIF provided massive capital support to these banks under strict conditions and all three banks were nationalized in the spring of 1992 (Honkapohja, 2009). As in Finland and Sweden, shareholders were not protected by extensive creditor guarantees (Sandal, 2004). Instead, the government tried to maintain confidence in the banking system through media statements (Honkapohja, 2009). Although the costs of crisis resolution were high for the Nordic countries, the net costs were lower than the gross costs. The fact that the net costs were so low compared to the gross costs is largely due to the methods of crisis resolution. Faced with systemic banking crises with widespread insolvency problems, the Nordic countries had three options to deal with the crisis. The first was to provide open bank support to banks in

distress, the second was to nationalize troubled banks and privatize them in the future, and the third was to liquidate insolvent banks and pay depositors and other creditors. Among these methods, the one that has a net cost-reducing effect and is preferred predominantly by the Scandinavian countries has been to nationalize troubled banks and sell their equity capital in the post-crisis period when stock prices reach favorable levels. As can be seen from the table above, in Norway, where nationalization was higher than in the other two countries by 2001, the net financial burden of the public sector was negative and even profits were made from the support provided during the crisis (Sandal, 2004).

In general, there are four reasons for the success of the Nordic crisis resolution. First, there was political consensus in the countries in resolving the crises. Second, public authorities provided incentives for transparency about banks' financial conditions and problems. Third, non-performing loans and real estate values were accounted for in an open and transparent way, and the liquidation of banks and financial firms was allowed. Finally, non-performing loans were transferred to private asset management companies at realistic market values (Kokko and Suzuki, 2009).

3. The Mexican Crisis

The Mexican crisis of 1994-1995 was the worst recession to hit a single country since the 1930s (Krugman, 2010). The crisis occurred as a result of financial vulnerabilities caused by financial liberalization in the absence of sound legal and regulatory framework and short-term capital flows shaped by investors' expectations, combined with a fixed exchange rate. In the Mexican crisis, expansionary fiscal policies and a weak banking system that was unable to defend the exchange rate were the main factors that played a role in the crisis.

In the pre-1980 period, the financial system in Mexico was completely dominated by the banking sector, which in turn was controlled by the state. Between 1950 and 1980, the state intervened in financial intermediation through very high reserve requirements, selective lending quotas and borrowing interest rates set by the central bank (Copelman, 2000).

The regulations implemented by the state in the banking sector were similar to the hypothesis put forward by Stigler in the "Regulatory Capture Theory". In exchange for maintaining macroeconomic stability and financing budget deficits through secret agreements with banks, the state designed and implemented regulations and antitrust laws in the banking sector for the benefit of commercial banks (Musacchio, 2012). Confirming the hypothesis expressed in the theory, despite the deteriorating economic conditions in the 1970s, the profits of the four major banks in the banking system in pesos, Mexico's national currency, rose spectacularly (Sigmund, 2011). Between 1977 and 1982, even though the inflation rate did not change significantly, the banks' profits increased by 1156% (Mazdresch and

Levy, 1991; Sigmund, 2011).

The self-interested "good relations" between the banking sector and the state began to reverse in the second half of the 1970s. Blaming the increasing difficulty of monitoring banks' foreign exchange activities and their participation in speculative attacks against the peso for the 1982 crisis, the government nationalized 58 of the 60 banks in the banking sector in September 1982 in exchange for indemnification bonds issued to bank owners (Musacchio, 2012). Subsequently, the number of banks was reduced to 18 through mergers. Nationalization was implemented as a rational response to the banks' excessive profits, facilitating mass capital flight and increasing concentration within the sector. In contrast, nationalization led to a highly concentrated banking system that lent according to political priorities rather than creditworthiness (Unal and Navarro, 1999).

Mexico's loss of access to international credit markets after the 1982 crisis, when it declared a moratorium on foreign debt default, led the government to finance its budget deficits with domestic loans. Accordingly, the state absorbed domestic loans through high reserve ratios imposed on the nationalized banking sector. The use of resources generated in the banking sector by the state led to the exclusion of private sector financing. In 1986, 72% of commercial bank loans were utilized by the state (Copelman, 2000).

In addition to the exclusion of private sector borrowing, the nationalized banking sector remained under financial pressure until the late 1980s. The state imposed a series of credit-inefficient regulations, including interest rate caps on bank deposits and loans and mandatory credit quotas to high-priority sectors. Commercial banks could freely allocate only 25% of total loans. All loans above this percentage had to go to the state or priority sectors of the economy. In addition, until 1989, the state controlled the way banks operated, including the choice of location, the number of branches, the number of employees, and the approval of annual budgets for income and expenditure (Hernandez-Murillo, 2007).

While the role of the banking sector in financial intermediation gradually declined as a result of the restriction of universal banking activities and nationalization, the non-bank financial sector grew rapidly between 1982 and 1988. The ratio of assets of non-bank financial institutions to total assets in the financial system rose from 9.1% in 1982 to 32.1% in 1988.

The rapid growth of the non-bank financial sector was also driven by the re-privatization of activities outside traditional banking in multiple banks (Copelman, 2000). The state allowed former bank owners to buy non-bank financial subsidiaries in exchange for compensation bonds. In addition, the growth in the non-bank financial sector and the increase in the issuance of short-term treasury bills led to a rapid expansion of the securities market. Although Treasury

bill issuance started in 1978, by the time of the Madrid government these instruments had become the most important source of government funding and the role of commercial banks in public debt financing had diminished (Gruben and McComb, 1997).

Despite the growth of the non-bank financial sector and improvements in state-owned commercial banks in the late 1980s, investment and production in Mexico remained stagnant. The ability of the stressed financial system to channel funds into productive investments was not sufficient to overcome the economic stagnation caused by rising inflation and low oil prices due to the financing of high debt service payments from the 1982 crisis with domestic credit and money printing in the absence of access to international credit markets. Accordingly, a comprehensive stabilization program called "Pacto" was introduced on 15 December 1987. As a result of the stabilization program, the improved fiscal balances without any recession paved the way for the financial reforms necessary for economic growth (Copleman, 2000).

In 1988-1989, a series of reforms were implemented to deepen the financial system and make it more competitive. The main objectives of the reforms were to remove heavy regulation in the financial markets, to improve the supervision and surveillance techniques of the National Banking Commission (Comision Nacional de Bancaria) and the National Securities Commission (Comision Nacional de Valores), to increase competition among market participants, to improve the capital structure of financial intermediaries and to enable them to take advantage of economies of scale, and to partially reduce barriers to entry into the financial system (Montes-Negret and Landa, 2001). In line with these objectives, it was first decided in the fall of 1988 that interest rates would be set under market conditions and credit quotas for priority sectors were abolished. In 1989, the selective credit mechanism and reserve requirements were abolished, and new financial instruments were created. Interest payments on deposit accounts were allowed and interest rate caps were lifted on all deposits and securities (Copelman, 2000). With the implementation of the Brady Plan and the stabilization program, access to international capital markets was restored. The structure of state-controlled development banks, which provided loans to state-owned firms operating in priority sectors and to private sector firms, changed rapidly. New capital adequacy ratios were set in 1991, although not strictly in line with Basel standards, and banks were no longer required to purchase government-issued debt securities.

In addition to updating the regulatory framework in the financial system, new laws paving the way for the privatization process were enacted to complement the financial reforms (Hernandez-Murillo, 2007). In the summer of 1990, the Credit Institutions Law and the Financial Groups Law were passed by parliament. The Credit Institutions Law set the conditions for the supervision and

oversight of the banking sector, while the Financial Groups Law authorized the operation of integrated financial groups that combine different types of financial transactions under universal banking principles. In addition, a new deposit insurance institution, FOBAPROA (Fondo Bancario de Proteccion al Ahorro), administered by the central bank, was created to provide support to banks in financial distress (Unal and Navarro, 1999).

In August 1990, the basic principles and objectives of the privatization program for the banking sector were made public by the Ministry of Finance. The main objectives of the program were to increase efficiency and competition in the financial system and to improve the capital structure of banks. In addition, it was expected that the management independence granted to banks would lead to an increase in savings, which would be channeled by the banks into investments that would improve the competitiveness and productivity of firms (Lee, 2001). However, despite the ostensible objectives, the government's real goal of the program was to generate high privatization revenues that would make it possible to pay off the debt from the 1980s. Consequently, consistent strategies were pursued (Gruben and McComb, 1997).

First, the government tried to signal to potential buyers that it would operate in a non-competitive system in which it could compensate them for the high prices they had paid in the bidding process. Accordingly, regulations were introduced to restrict entry into the system. New banks were required to obtain a concession - authorized by the Ministry of Treasury - in order to enter the system. In addition to controlling entry into the system, this also led to an increase in the value of banks' concessions at the bidding stage. Foreign banks were not allowed to participate in the auctions in 1991 and 1992 to signal to potential buyers that they would not compete with foreign banks. In addition, the bidding process was structured to maximize bid prices. The sale of the banks was carried out in a long process of six rounds rather than a single round of sealed bidding. This increased the competition to buy the banks in later rounds and thus bid prices.

Another strategy of the government that was consistent with the objective of maximizing bid prices, but which contributed to the crisis, was not to change the accounting rules that favored potential buyers before the privatization process to generally accepted accounting standards. According to traditional accounting rules in Mexico, the mere payment of interest payments on a loan when it matured was sufficient for it not to be considered a non-performing loan. Loans for which interest payments were made were categorized as "rediscount" loans and could be rolled over. A reorganization of this rule - as it would have increased the ratio of non-performing loans to total loans - could have led to a decline in the market value of banks and the book value of their assets (Haber, 2005).

In line with the signals the government had given to potential buyers prior to the sale of the banks, the

government sold 18 state-owned banks over a 14-month period between June 1991 and July 1992. The privatizations resulted in more than \$12 billion in proceeds from the sale of the banks. This was more than 3 times the average book value of the banks and about 15 times their earnings in the previous year (McQuerry, 1999).

Although the fact that the state signaled that it would regulate the banking system in a non-competitive manner for the benefit of potential bank owners in order to gain maximum revenue from the privatization process resembles the relationship of interest between banks and the state in the pre-1980 period, there are some differences between the two periods. According to the Rent Seeking Theory of Regulation, competition for artificial rents created by government regulation leads to rent-seeking expenditures. Therefore, inefficiency arising from regulation is the sum of the social cost of monopoly or oligopoly and rent-seeking expenditures. In this context, the fact that banks were sold at a price 3 times higher than their book value as a result of the competition to buy banks whose franchise value increased due to the regulations implemented prior to the privatization process shows the cost of rent-seeking expenditures, but also proves that the inefficiency arising from regulations is not just the social cost of oligopoly.

Financial liberalization, shaped by financial reforms and the privatization of the banking sector, led to significant increases in credit to the private sector and the level of financial intermediation (Montes-Negret and Landa, 2001). Parallel to the increase in financial depth, the ratio of bank lending to GDP rose from 16.9% in 1988, when interest rate restrictions were lifted, to 24.7% in 1991. Following the privatization of the banking sector in 1991-1992, the ratio rose to 30.7% in 1992, 34.7% in 1993, and 43.3% in 1994, as banks rushed into risky lending activities to compensate for the high purchase prices, they had paid during the bidding process (Lee, 2001).

Despite the increased role of the banking system in financial intermediation, its efficiency remained at low levels. The ratio of non-interest expenditures to total assets, a common measure of bank efficiency, was 5.3% in Mexico and 3.6% in the US at the end of 1991. Nevertheless, high spreads between interest rates on loans and the cost of funds - a consequence of the oligopolistic structure of the banking sector, where the big three banks owned 60% of total assets - contributed to excessive profits. In the first 5 months of 1991, when all 18 banks were state-owned, the difference between the cost of funds and interest rates on loans was between 5.31% and 6.29% points, while in the last 5 months of 1992 it was between 8.09% and 10.69%. Moreover, the inflation rate in 1992 was lower than in 1991 (Gruben and McComb, 1997).

Along with the rapid expansion in bank loans, the ratio of non-performing loans to total loans also increased rapidly. While the share of "declared non-repayment" loans in total loans was 3.6% in 1991, it reached 6.1% in 1994. On the other hand, the share of rediscount credits that were renewed

with only interest payments despite being overdue rose from 9.9% to 11.0%. Thus, at the end of 1994, the ratio of "declared non-repayable loans" to total loans was actually 17.1% (Haber, 2005).

Banks' underestimation of non-performing loans by taking advantage of the weaknesses in accounting standards caused capital buffers against loan losses to lose their function. In the pre-crisis period, banks' capital adequacy ratios and loan-loss reserves were at reasonable levels. The capital adequacy ratio, which was around 7% in early 1992 when the amount of non-performing loans started to increase, was raised to 9-10% in a short period of time, above the Basel-I standards. On the other hand, the ratio of loan loss reserves to non-performing loans, which was around 35% in 1992, was increased to around 50% in 1993 (Desmet, 2000). Looking at these figures, one might have thought that the banking system was prepared for the slowly growing debt problem. However, the fact that only the loans that were declared non-repayable were taken into account in the formulation of these ratios caused the ratios to be overestimated.

The legal and regulatory environment that failed to prevent banks' aggressive lending policies was the main factor behind the rapid increase in non-performing loans. The lack of effective supervision and oversight helped inexperienced and overly optimistic banks to operate in such a way that their marginal costs exceeded their marginal revenues in order to increase their market share (Gruben and McComb, 1997). Low capital adequacy and the existence of comprehensive deposit insurance guaranteeing all deposits encouraged depositors whose money was not at risk not to monitor banks' activities and banks to engage in risky lending activities to increase their market share. In addition, "lenient" accounting standards, which did not require reporting until 1995, allowed financial groups to provide related lending or connecting lending at low interest rates to their affiliates (Hernandez-Murillo, 2007).

1994 was a year of political and economic turmoil for Mexico, with serious damage to the country's image. The uprising in the southeastern state of Chiapas in January, the gradual increase in interest rates by the Federal Reserve (Fed) in February, and the assassination of Luis Donaldo Colosio, the ruling party's presidential candidate in the general elections, in March led to a change in foreign investors' expectations about the country (Musacchio, 2012). These events were followed by the first speculative attack against the domestic currency in March 1994, and real and nominal interest rates soon rose sharply. At this point, the central bank had two policy options. One was to protect the exchange rate by allowing interest rates to rise and to bail out the banking system, which was already weak from the increase in non-performing loans, with financial support. The other was to keep interest rates under control to protect the banking system and respond to speculative attacks with foreign exchange reserves. Aware of the weakness and vulnerability of the banking system, the central bank opted

for the second option and limited the rise in interest rates through sterilization policies. On the other hand, relatively high interest rates in the US and the increased possibility of devaluation pushed interest rates slightly upwards.

Despite the limited increase in interest rates, the situation of the banking system worsened. In November 1994, the amount of overdue tesobonos exceeded the Central Bank's dollar reserves. Foreign exchange reserves used to defend the exchange rate fell from \$29 billion in February 1994 to \$6 billion in December 1994. As refinancing became impossible and efforts to respond to the speculative attack on December 21 proved inadequate, the peso was allowed to float (Desmet, 2000).

The indirect effects of the devaluation on bank balance sheets were greater than the direct effects, as the regulatory system limited banks' foreign exchange exposure. As a result of the contraction in economic activity and the rise in interest rates, the amount of non-repayable loans increased. On the other hand, the reluctance of foreign creditors to roll over dollar-denominated loans led borrowers to demand dollars to repay their loans. In response to the increased demand for dollars, the peso value of dollar-denominated debt rose sharply, resulting in an increase in non-performing loans (McQuerry, 1999). The share of non-performing loans in the banking system reached 36.3% of total loans in 1995 and 52.6% in 1996.

As the vulnerability of the banking system became more pronounced with the increase in non-performing loans, the regulatory authorities (the Central Bank, the Ministry of Finance and the National Banking and Securities Commission) launched a major rescue operation, which began in 1995 and continued until December 1998, in order to prevent a complete collapse of the banking system and the re-nationalization of banks.

The government first set up a special short-term program for bank recapitalization by establishing a trust fund, PROCAPTE, financed by FOBAPROA and the central bank. According to the program, the trust fund purchased 5-year subordinated debt securities from banks and in return provided them with the capital support necessary to maintain the capital adequacy ratio of 9% (Haber, 2005). However, high interbank interest rates were applied to the subsidies and banks were prohibited from issuing subordinated debt securities until they repaid the subsidies. Although PROCAPTE was a very effective program that could be used to rapidly improve banks' capital structures, it did not attract the expected interest in the market and banks preferred to raise capital by their own means. This was because participation in the program was perceived by the market as a sign of weakness (McQuerry, 1999).

The swap of non-performing loans for bonds issued by FOBAPROA was another program in the bailout package. Under the program, FOBAPROA issued central bank-backed, 10-year, zero-coupon, non-transferable bonds to commercial banks in exchange for assuming some of the

overdue loans and repayment rights. To preserve their real value, the bonds were indexed to the inflation rate and banks were allowed to roll over or sell the debt when it matured. In addition, banks could raise capital by 1 peso for every 2 pesos worth of loans transferred to FOBAPROA (Haber, 2005). Although the FOBAPROA program was effective in cleaning up the non-performing loans on banks' balance sheets, it was insufficient to provide the necessary contribution to achieve capital adequacy (McQuerry, 1999).

Although foreign currency borrowing was restricted by regulations, foreign currency loans accounted for more than 30% of banks' total debt. The government therefore provided foreign exchange support to banks by opening a special dollar credit window to enable them to meet their dollar-denominated liabilities. The support served its purpose and all banks benefited.

As part of the rescue operation, in early 1995 the government allowed foreign investors to buy troubled banks. Accordingly, foreign investors could buy troubled banks whose capital was less than 6% of the total capitalization of the banking system. Later on, this ratio was increased to 25%. On the other hand, between 1995 and 1998, debt relief programs were implemented to support small and medium-sized borrowers, including interest rate reductions, payment reductions and debt restructuring at fixed real interest rates (Hernandez-Murillo, 2007).

In January 1997, the National Banking and Securities Commission changed the reporting methods for banks to comply with new accounting standards. The degree of transparency of banks was increased and the possibility to renew overdue loans was eliminated. The new rules helped to better understand the extent of under-reporting of non-performing loans under the old system.

The cost of the bailout programs in terms of public debt was heavier than expected. In February 1998, the liabilities of FOBAPROA, which financed the bailouts, were close to \$60 billion - five times the proceeds from the privatization program. The fiscal burden of the crisis on the economy between 1994 and 1997 amounted to 19.3% of GDP (Caprio and Klingebiel, 2003).

4. The East Asia Crisis

The East Asian crisis differs from the Scandinavian and Mexican crises in terms of its causes, spillovers and consequences. While in the previous crises, serious deterioration in macroeconomic indicators as a result of failed macroeconomic policies of the government was considered to be the main cause of the crises, the main factor that played a role in the Asian crisis was the increased fragility of financial systems at the micro level (Boorman et al, 2000).

The outbreak of the East Asian crisis in Thailand has been explained by the fact that the mechanism of the spread of the crisis was investors' perception of the region as a whole. The fact that the crisis was more severe and widespread than

previous crises was attributed to the depth of financial systems and the highly leveraged corporate sector (Claessens, Diankoy and Klingbiel, 1999).

Although the East Asian crisis had an impact on the region as a whole, the four members of the Association of Southeast Asian Nations (ASEAN) - Thailand, Indonesia, the Philippines, Malaysia and South Korea - were the countries that suffered the most from the crisis.

From the 1960s to the second half of the 1990s, East Asian countries experienced sustained rapid growth, impressive structural changes and significant improvements in the quality of life. The export-oriented growth strategy adopted in most East Asian countries and the government-bank-firm coalition consistent with this strategy contributed significantly to high export earnings and high economic growth. Average economic growth rates between 1980-89 were 7.8% in South Korea, 7.3% in Thailand, 5.3% in Indonesia and 5.8% in Malaysia (Bustelo, 1998).

In East Asian countries, income distribution was relatively equal, and households were the largest source of savings. While households kept most of their savings in the form of deposits in banks, the investments of the corporate sector, which was the driving force of the region's rapid economic growth for many years, were financed by high leverage ratios and bank loans. Therefore, the financial systems of these countries were dominated by banks.

The fact that banks played an important role in financial intermediation led to the emergence of relationship banking, which is characterized by close long-term relationships between corporate managers and bankers. Within the bank-based financial structure, the state often provided incentives for lending to priority sectors. Capital accounts were partially or completely closed and therefore capital could not freely leave the country. Domestic and foreign economic agents operating in the country were not allowed to open accounts in commercial banks abroad. Banks could not lend in foreign currency in domestic markets and private non-bank companies could not borrow from abroad. Foreigners could not buy shares of domestic firms in domestic securities markets, while domestic firms could not sell debt securities they had issued in international stock and bond markets. The activities of foreign banks in domestic markets were severely restricted. Restrictive instruments regulating the financial system not only acted as a buffer against systemic shocks in the highly leveraged corporate sector, but also allowed firms to set investment levels according to shareholders' risk preferences. Investments were financed by high domestic savings (Wade, 2002).

In the early 1990s, many East Asian countries began to run deficits in their current accounts as investment in manufacturing, real estate and infrastructure sectors outstripped domestic savings. In addition to rising current account deficits, countries in the region liberalized their financial systems one after another under pressure from the International Monetary Fund, the World Bank and domestic

interest groups.

With financial liberalization, restrictions on interest rates on deposits and loans and on cross-border (offshore) capital transactions were lifted. Governments in the region allowed debt financing of companies and increased competition in financial services. Foreign banks were authorized to trade large amounts of foreign currency. Banks and manufacturing firms could easily obtain loans from financial institutions at home or abroad (Bustelo, 1998).

In parallel with the liberalization of financial systems and capital accounts, there were massive capital inflows to East Asian countries in the first half of the 1990s (Kokko and Suzuki, 2009). While total capital inflows in ASEAN-4 countries and South Korea amounted to USD 150 billion between 1980 and 1989, this amount reached USD 320 billion between 1990 and 1995 (Bustelo, 1998). While the ratio of capital inflows to GDP in the region averaged 1.4% between 1986 and 1990, it rose to 6.7% between 1990 and 1996 (Radelet and Sachs, 1998).

Financial liberalization contributed significantly to financing overinvestment. However, the ability of governments to coordinate borrowing and investment and to prevent market failures has weakened. Vulnerabilities in the economies of the region increased (Bustelo, 1998). In the ASEAN-4 countries and South Korea, whose domestic currencies are linked to the dollar, exchange rates appreciated by more than 25% between 1990 and 1997, especially after 1994, as a result of the appreciation of the dollar against other currencies and capital inflows. In parallel with the decline in export growth due to the overvaluation of the exchange rate, current account deficits increased (Radelet and Sachs, 1998). In contrast, current account deficits were seen as benign because they were not caused by a savings-investment imbalance in the public sector and foreign debt was used to finance investment rather than consumption (Goldstein, 1998).

Despite the belief that the deterioration in macroeconomic fundamentals could be resolved through moderate adjustments, the increasing fragility of financial systems signaled the approach of a major financial crisis. The opening of banking systems to new entrants led to a decline in the franchise values of banks operating within the system and increased competition. With increased competition, domestic banks faced declining profit margins and turned to lucrative but riskier activities. Increased access to cross-border borrowing through the liberalization of financial systems across East Asia made it easier for financial institutions to take on excessive exchange rate risk and external borrowing. In parallel, there was a rapid increase in lending by financial institutions to the private sector (Brownbridge and Kirkpatrick, 1999). Rapid credit growth led to increased investment, which in turn led to more capital inflows and credit expansion, creating a self-feeding credit cycle (Lindgren et al, 1999).

Thanks to the liberalization of financial systems, the ability

of the corporate sector and financial institutions to borrow easily from foreign markets and institutions led to large increases in external debt.¹²⁹ With the high rate of short-term borrowing and the use of debt to finance investments in sectors without foreign exchange earnings, maturity and exchange rate mismatches in banks' balance sheets increased. Borrowing in foreign currency and lending in domestic currency in the face of a possible devaluation increased the exchange rate risk, while short-term borrowings from foreign banks increased the maturity risk (Radalet and Sachs, 1998). Banks' domestic lending in foreign currency to mitigate exchange rate risk also increased credit risk, as a possible depreciation of the domestic currency would increase borrowers' debt burden (Brownbridge and Kirkpatrick, 1999).

During the 1980s and the first half of the 1990s, asset prices rose rapidly in parallel with the rapid economic growth in Asian countries. On the other hand, as a result of the asset bubble that burst in Japan in the early 1990s, financial and real estate companies shifted their investments to other countries in the region and increased capital inflows due to financial liberalization were directed towards investments in infrastructure and real estate sectors, asset prices rose above their real values (Kokko and Suzuki, 2009). Moreover, the fact that the growth in financial markets was based on lending to cyclical and non-cyclical sectors such as the real estate sector increased credit risk and led to additional problems (Miller and Luangaram, 1998). The speculative bubble created by overly optimistic expectations about the region and short-term foreign investment further increased the vulnerability of financial markets to systemic shocks.

In 1995 and 1996, with the bursting of the asset bubble in the real estate market in Bangkok and Thailand, investors became aware of the vulnerabilities in the economies of the region and positive expectations about the region began to reverse. Chaos ensued in the financial system and the foreign exchange market as foreign investors realized that domestic investors would be unable to meet their short-term obligations in the face of a possible devaluation. In addition to the troubles in the financial markets, the slowdown in exports and economic growth rates increased concerns about the region. Rising interest rates in Europe and the US led to a relative decline in the rate of return on Asian investments for speculators and investors. On the other hand, as a result of deteriorating economic conditions in Japan in the second quarter of 1997, the Japanese authorities signaled that interest rates might rise in order to prevent the depreciation of their national currency, the yen. The combination of the "unrealized" threat of interest rate hikes in Japan, worries about the future of the baht, and increased opportunities for investors in the US and Europe led to large-scale capital flight from the region.

As the prospect of devaluation became more likely, local and foreign firms operating in Thailand began to rush to the dollar. In mid-1996 and early 1997, speculative attacks against the baht, Thailand's national currency, gained

momentum. The Central Bank, which had initially sold baht to the market to prevent the appreciation of the exchange rate, started to buy baht from the market to prevent the depreciation of the baht. However, when its foreign exchange reserves fell to critical levels, it gave up and tried to stop the depletion of its foreign exchange reserves by borrowing secretly from abroad (Wade, 2002).

In March 1997, the Thai government promised to buy \$3.9 billion worth of non-performing loans from financial firms, but soon reneged. Unable to withstand further pressure on the domestic currency, the Bank of Thailand floated the baht on July 2, 1997 (Radalet and Sachs, 1998).

Following the devaluation of the baht, investors panicked as they saw the economies of the region as a whole, which accelerated speculative attacks on the national currencies of other countries. One after another, economies in the region floated their national currencies. By January 1998, Indonesia's national currency rupiah had depreciated by 79%, Thailand's national currency baht by 52%, Malaysia's national currency ringgit by 42%, South Korea's national currency won by 41% and the Philippines' national currency peso by 36%.

With the floating of national currencies, foreign banks, which routinely rolled over short-term debt, began demanding principal as well as interest from highly leveraged and illiquid companies. Liquidity-strapped companies have also delayed payments to producers, cut spending, sold inventories at discounted prices and reduced staffing levels to reduce cash outflows. The proportion of large companies in South Korea and Southeast Asia that were technically insolvent rose from 21% in 1997 to 32% in 1998. The crisis was exacerbated by domestic banks recalling loans to the private sector and the amount of non-performing loans increased (Wade, 2002). At the height of the crisis, the share of non-performing loans in total loans was 65-75% in Indonesia, 30-40% in South Korea, 33% in Thailand, 25-35% in Malaysia and 12% in the Philippines (Caprio and Klingebiel, 2003).

East Asian countries' initial response to the crisis was to provide liquidity support to financial institutions by central banks to offset deposit flight. In Thailand and Indonesia, which provided the largest liquidity support to financial institutions among the economies in the region, the support was around 20% of GDP. Sterilization policies were implemented to prevent liquidity support from increasing the money supply in economies and undermining central banks' monetary controls.

Another measure to prevent bank panics was comprehensive guarantees. Indonesia, South Korea, Malaysia, and Thailand announced that they would provide full guarantees to depositors and creditors and tried to build confidence in the banking system. In order to enhance the credibility of the comprehensive guarantees, the guarantees were presented and legalized as part of IMF-supported programs (Lindgren et al, 1999).

As a result of the initial response to the crisis, credit growth slowed, and bankers became more selective in their lending behavior as credit supply contracted. Nevertheless, the financial system had to be restructured in order for financial institutions to reach their pre-crisis levels of solvency and profitability without moral hazard.

In the post-crisis period, institutional frameworks were first established to manage the restructuring process in financial systems. Asset management companies were established in order to clear the balance sheets of financial institutions of non-repayable assets within the system. While nonviable institutions that lost their ability to operate in the financial system were removed from the system through liquidation, nationalization or mergers, the capital structures of viable banks were reorganized.

Countries applied different methods to restructure and sell non-performing loans. In Indonesia, South Korea and Malaysia, non-performing loans were restructured through state-led institutions, while a market-oriented approach was adopted in the Philippines and Thailand. In addition, a secondary market was established in South Korea to sell non-performing loans (Kawai, 2000).

The financial burden of the crisis on the economies of the region has been very heavy and has been borne by the public sector. The fiscal burden of the crisis was 55% of GDP in Indonesia, 35% in Thailand, 28% in South Korea and 7% in the Philippines (Caprio and Klingebiel, 2003).

In the pre-crisis period, there were many factors that encouraged financial institutions in East Asian countries to engage in imprudent management and excessive risk-taking. Financial institutions were forced to lend excessively to risky and unprofitable projects due to political pressures and insider transactions. Although deposit insurance was not in place in most countries, implicit guarantees were provided to depositors and creditors by not allowing financial institutions to fail (Dekle and Kletzer, 2000). The lack of transparency in financial markets did not allow even foreign creditors to effectively monitor the activities of financial institutions. Related-party transactions and off-balance sheet financing allowed firms to hide their high leverage. Financial institutions, whose activities were not sufficiently scrutinized due to implicit safeguards and lack of transparency, suffered from moral hazard, and resorted to imprudent lending policies.

In the early 1990s, many Asian countries reformed their banking regulations and supervisory systems. In this context, South Korea, Indonesia, Malaysia and Thailand raised the capital adequacy ratios in their banking systems above the Basel Standards. In Thailand and Indonesia, restrictions were imposed on subordinated lending by banks (Brownbridge and Kirkpatrick, 1999).

Although East Asian countries were aware of the need for prudential regulation and supervision during the financial liberalization process, in many countries' regulators used discretion rather than rules, which led to inadequacies and/or

inaccuracies in the implementation of regulations. Instead of increasing the efficiency of financial markets, the preferred option was for regulators to protect troubled banks and their borrowers through regulatory forbearance. Errors in loan classifications and loan provisions, lack of attention to the quality of capital, and technically weak supervisors not only rendered capital adequacy ratios dysfunctional but also encouraged financial institutions to take excessive risks.

Accounting for non-performing loans was handled differently in East Asian countries. When loans were not repaid, they were defined as under-performing loans and repayments were classified as past due. The time required for under-performing loans to be classified as non-performing varied across countries (Walter, 2002). For example, this period was more than 6 months in South Korea, 12 months in Thailand and Malaysia, and 90 days in the US. On the other hand, loan loss provisioning was not sufficient to cover losses and overstated capital levels. In South Korea, financial institutions were required to maintain loan loss provisions for non-performing loans at 20% of the loan value, compared to 7.5% in Thailand and 0% in Malaysia. Even in many developing countries in Latin America, loss provisioning rules were stricter than in East Asia (Brownbridge and Kirkpatrick, 1999). In Thailand and Indonesia, however, banks were allowed to deduct loan loss provisions from the value of loan collateral, usually illiquid real estate. Up to 75% of the collateral value of non-performing loans could be deducted as loan loss provisions in Indonesia and up to 90% in Thailand.

Although banks' Tier 1 capital consists of shareholders' capital and liabilities such as subordinated debt, cross-shareholdings, which are widespread in Asian countries, made it difficult to determine the true level of bank capital. While supervisors should supervise financial institutions on a consolidated basis to avoid double counting the same capital, in Thailand and Indonesia, cross-shareholdings were included in capital adequacy ratio calculations (Walter, 2002).

Lacking sufficient independence, regulators were easily influenced by political pressures. In an environment where governments supported corporate sector investments through implicit guarantees, regulators could not impose punitive sanctions on banks for non-performing loans on their balance sheets. In other words, regulators were captured by the banking sector (Lindgren et al, 1999).

Even if regulators were not affected by political pressures, they were technically inefficient. Although regulators supervised large banks on-site, they did not have the capacity to audit all accounting decisions, necessitating cooperation with external auditors to diagnose problems with loan accounting and loss provisioning practices in banks. However, external auditors tended to collude with banks, and international accounting firms gave their naming rights to local auditors without investigating the quality of the firm and its personnel, further exacerbating audit inefficiencies (Walter, 2002).

5. Conclusion

In this study, three financial crises are analyzed in detail within the framework of financial regulations. In this analysis, the pre-crisis period is described, while the aftermath of the crisis is analyzed through reforms and remedies. In other words, the relationship between financial regulation and financial crises is evaluated through the analysis of country experiences. The selection of the periods in which the analyzed crises occurred is based on the 1990s when the effects of the global wave of financial liberalization on financial markets began to be observed. The dynamics of the crises, the degrees of impact of regulation and regulatory problems on crises, and crisis resolution mechanisms constitute the criteria in our country preferences.

The Scandinavian crisis is considered a crisis that emerged as a result of financial liberalization. Factors such as easy credit provision by banks, real estate bubble, and increasing risky loans have contributed to the crisis as a result of deficiencies in financial regulation. The Scandinavian crisis is a banking crisis in which financial liberalization policies coinciding with expansionary periods resulted in failure in the absence of strong prudential regulations (Honkaphoja, 2014). The most notable aspect of the Scandinavian crisis is the successful reduction of costs to national economies through the effective use of protective regulatory tools for the financial system. In this context, the main reason for including the Scandinavian Crisis in the analysis is its unique mechanism for crisis resolution. In this respect, the crisis serves as an important example of how the resolution activities should be carried out. However, despite the effective use of preventive regulatory tools, the inability to achieve the same success in preventive regulation tools due to lack of information and experience highlights the importance of a robust regulatory structure in protecting the financial system against adverse shocks. The achievement of political consensus in these countries, the incentives provided by public authorities to ensure transparency about the financial conditions and problems of banks, and the success of asset management companies in the sale of problematic assets have been effective in reducing the financial burden of crises, and even profits have been made as a result of the sale of assets taken over by asset management companies.

However, financial regulations have been effective in addressing crises in some countries. Mexico's significant reforms in financial regulations and strengthening of the banking sector after the 1994 crisis helped the country become more resilient to future crises. The Mexican crisis, where moral hazard stemming from implicit state guarantees and political connections played a significant role, exhibited similar patterns to the hypotheses put forth in economic regulation theories (Hoyos, 2021). Regulatory errors related to financial markets were designed to support the interests of the sector in exchange for sustaining unsustainable macroeconomic policies of the state. Additionally, during

the privatization process, which is part of financial liberalization, the misuse of resources for rent-seeking purposes further increased existing inefficiencies. Since the failures of financial regulation cannot be justified solely by lack of information and experience, the analysis of the Mexican where the regulatory process was heavily manipulated by economic, political, and bureaucratic forces, has been considered useful. The Mexican Crisis is a striking example, particularly in explaining the problems encountered in the formulation of regulations through the hypotheses put forward in regulatory theories.

The East Asian financial crisis occurred between 1997 and 1998, affecting countries such as Thailand, Indonesia, South Korea, Malaysia, and the Philippines. The role of financial regulations in this crisis is highly debated. Among the main causes of the financial crisis in East Asia were inadequate financial regulations and oversight. During this period, the regulations in financial systems proved insufficient alongside the liberalization of capital flows and increased external borrowing. Banks and other financial institutions provided risky loans, and investments in high-debt levels and risky ventures increased. This weakened the stability and resilience of the financial system. The lack of financial regulations accelerated and deepened the spread of the crisis. Particularly, the liberalization of foreign capital inflows and the increase in short-term speculative capital flows made the countries' financial markets volatile. Countries with high levels of external debt faced challenging economic and financial conditions alongside capital outflows. However, many East Asian countries implemented significant reforms in financial regulations after the crisis. Measures such as regulating the banking sector, strengthening risk management practices, and implementing capital controls were taken. These reforms strengthened the financial systems, reduced risks, and made them more resilient to future crises (Song & Lee, 2012).

The Asian crisis is a concrete evidence of the vulnerability of financial markets to systemic shocks resulting from weak institutional infrastructure and the failure to implement existing regulations in the post-financial liberalization period. Regulatory failures, especially those stemming from political pressures and technical inadequacies, rendered the buffers created against systemic shocks ineffective, while allowing financial institutions and companies to operate with high leverage. Structural characteristics unique to Asian countries, such as crony capitalism and lack of transparency, which did not pose significant problems for the financial systems in the region for many years, turned into elements that threaten the stability of financial systems with financial liberalization.

In conclusion, we can say that there is a complex relationship between financial regulations and the financial crises of the 1990s. While deficiencies and irregularities in financial regulations may have contributed to some crises, they can reduce or prevent the impact of crises when implemented effectively and appropriately. Therefore, the

design, implementation, and rigorous supervision of financial regulations are crucial factors.

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