

The Making of the Korean Financial Crisis

Financial Liberalization without Regulations

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In 1950, Korea was among the poorest countries in the world, with a per capita income of under US\$150.¹ Ravaged by a brutal war between 1950-53, a divided Korea was predicted to remain a "basket-case" for the foreseeable future. However, South Korea (hereafter Korea), defied the dire predictions — becoming in less than a generation the quintessential developmental success story — and a model for other developing countries to emulate. With the exception of a relatively short-lived recession in 1979-80, Korea enjoyed continuous economic growth between 1960 and 1997. With the economy expanding at an annual rate of over 8%, Korea's per capita income grew to US\$10,973 by mid-1997, earning it membership in the exclusive OCED (Organization of Economic Cooperation and Development) group of nations.² Already the world's eleventh largest economy in 1996, Korea publicly stated its ambition to outperform Japan technologically in the new millennium. Indeed, as the world's largest supplier of computer memory chips, the second largest shipbuilder, the third largest producer of semiconductors, the fourth largest maker of electronics and the fifth largest automobile maker, Korea hardly made an idle boast in its ambition.³

When the financial crisis unexpectedly hit Southeast Asia following the devaluation of the Thai baht on July 2, 1997, it was widely believed that the contagion would not spread to Korea. Not only was the Korean economy the second largest in East Asia, with a gross domestic product of 376 trillion won (or US\$454 billion), all the key macroeconomic fundamentals looked sound.⁴ First, since the early 1990s, the Korean economy had grown at an impressive rate. Though not as high as the

double-digit growth rate of the late 1980s, the growth rate still exceeded 8% in 1995 and 6% during the first three quarters just prior to the crisis. Second, inflation was not only under control, but since 1993 it remained relatively low, fluctuating between 4% and 5%. Price stability and expectations of low inflation also led to a gradual decline in nominal interest rates.⁵ Third, the real exchange rate was not significantly overvalued. In fact, in the three years prior to the crisis, the real exchange rate was essentially flat. Fourth, the gross domestic savings remained high, exceeding 30% in 1995-96. Fifth, the fiscal deficit, which was about 2.5% of GDP in the early 1980s, was turned into a surplus in 1993 — a position it maintained on the eve of the crisis. Sixth, between 1990-95, Korea's current account deficit averaged 1.9% of GDP. It increased significantly in 1996 to US\$24 billion (4.9% of GDP) because the Korean monetary authority decided to adhere to a strong won policy, despite market pressures for devaluation, due to their concern about price stability. However, as the Japanese yen became strong again by early 1997, the current account deficit fell to 2.5% of GDP, and by mid-1997 to US\$8.2 billion or 1.9% of GDP.⁶ Thus, on the eve of the crisis, Korea's external position was fairly sustainable. After all, its current account deficits were used to finance investment rather than consumption. Seventh, although Korea's foreign debt had grown significantly in the 1990s, it was not unsustainable. That is, the Korean debt/GNP ratio in 1996 was still only 22% — well under the critical level of 48% specified by the World Bank.⁷ Moreover, the debt service ratio of Korea was low at only 5.8%.⁸ Finally, unlike the other crisis-hit economies, Korea was blessed with a 99% literacy rate.⁹ From a macroeconomic perspective, the Korean economy looked well managed and sound.

In November 1997, when Thailand, Indonesia, Malaysia and the Philippines were in the throes of a deepening financial turmoil, the headlines in the Korean media consisted mainly of stories dealing with the upcoming presidential election.¹⁰ Thus, on November 19, when President Kim Young Sam announced his decision to fire several key economic policymakers on the grounds of gross economic mismanagement, most Koreans were surprised at the news. However, two days later, on the morning of November 21, the Korean public, including many outside observers, were shocked to learn that the Korean government had formally requested the IMF (International Monetary Fund) for emergency standby loans because Korea's own foreign reserve level was very low (at US\$7.3 billion) and most foreign financial institutions were unwilling to roll over their short-term loans to Korea.

On December 3, 1997, in order to calm the financial markets, the

IMF and the Korean government announced that they had agreed to a loan package totaling an unprecedented US\$57 billion to help Korea overcome a mounting foreign exchange problem and stop the rapid deterioration of the nation's credit standing. Of this, US\$21 billion would come from the IMF, US\$10 billion from the World Bank, US\$4 billion from the Asian Development Bank, and the remainder from bilateral sources, including US\$ 10 billion from Japan and US\$5 billion from the United States. Due to Korea's desperate situation, the IMF's part of the package was to be released quickly under the Fund's accelerated emergency financing mechanism.¹¹ However, the Korean government had to accept virtually all of the IMF's conditions. On December 4, the IMF released US\$5.56 billion to the Korean government. An additional US\$3.58 billion was to be made available following the first review on December 18, and an additional US\$2 billion on January 8, 1998, following the second review. The sheer magnitude of the bailout package and the acceptance of the IMF's many conditions led most Koreans to the same conclusion as their President, that "we have lost our economic sovereignty." The Korean media designated December 3 as the "day of national disgrace" and President Kim warned his fellow citizens to prepare for an indefinite period of humiliating "bone-carving pain."¹²

What went Wrong? Competing Explanations

Why did an economy with such seemingly sound fundamentals succumb so quickly to economic shocks? Two general interpretations have informed the discussion. According to the "fundamentalist" view, the Asian crisis was caused by poor economic fundamentals and policy inconsistencies. Proponents of this view argue that apparently sound macroeconomic indicators masked systemic structural problems. For example, Korea, like many other Asian economies, provided implicit guarantees to the banking system, which were often engaged in lending practices that favored financially unqualified borrowers. These implicit guarantees led banks to lend recklessly. This, in conjunction with poor corporate governance, created a stock of non-performing loans, thereby risking bank collapses.¹³ By contrast, the "panic" interpretation views the self-fulfilling pessimism of international lenders as the root cause of the crisis. Highlighting the fact that between October-December 1997, capital outflows from Korea amounted to about US\$9.8 billion, the more sophisticated version of this argument interprets the crisis as a classic liquidity crisis - where Korean banks had insufficient reserves and insufficient access to funds, and where investors who were suddenly seized with panic refused to roll over short-term debt, in addition to demanding immediate payment.¹⁴

From the perspective of actual experience, analytical distinctions between the "fundamentalist" and the "panic" perspectives are less sharp than they are made out to be in the literature. Indeed, it is impossible to point to any emerging market economy that experienced a financial crisis but did not have significant fundamental weaknesses that called into question the sustainability of its policies. In the case of Korea, as the currency crisis began to unfold, it became clear that the Korean economy possessed a number of serious structural weaknesses, most notably weak financial sectors and over-indebted corporate sectors. Yet it is also impossible to ignore the fact that "reputational externalities" were almost certainly at work.¹⁵ That is, a crisis in one country affected investors' expectations and perceptions about common structural conditions and vulnerabilities in other countries. Yet, even while acknowledging the impact of structural problems in the Korean financial and corporate sectors, it is hard to avoid the judgment that Korea's punishment was disproportionate to the "crime" — because there is no doubt that panic withdrawal of capital and poor policy responses greatly exacerbated the crisis.

This article, while building on the insights of the fundamentalist and panic interpretations, provides a third perspective. It argues that Korea's financial crisis had both long-term and short-term causes. Weaknesses in both the financial and corporate sectors, especially inefficient management and imprudent lending among financial institutions, coupled with over investment and low profitability in the corporate sector, made them vulnerable to external turbulence. In fact, it will be argued that poor corporate governance was a major destabilizing factor for the Korean economy. Because the *chaebols* (a conglomerate group of firms, linked by indirect cross-shareholdings) were highly interdependent financially through cross-share holdings and cross-loan guarantees, the financial trouble of one *chaebol* could easily lead to a disaster for the whole group, including the banking system.¹⁶ Indeed, six of the 30 largest *chaebols* (Hanbo, Sammi, Jinro, Kia, Haitai and New Core) had already filed for court protection in bankruptcy proceedings in 1997, before the collapse of the won triggered by contagion from Southeast Asia. Compounding this was poorly sequenced capital account liberalization (or liberalization which was not accompanied by the necessary reforms and prudent supervision of the financial system), which increased the economy's vulnerability to financial panic and economic collapse. Despite a relatively low overall external debt level and a moderate and sustainable current account deficit, Korea had high short-term debt relative to its international reserves — which made it vulnerable to a balance-of-payments crisis. The sharp deterioration in terms of trade in 1996, the

bankruptcy of a number of important *chaebols*, and a change in international market sentiment following the collapse of the Thai baht in mid-1997 were the proximate causes.

Specifically, starting in the early 1990s, the Korean government began to relax its control over the financial sector, especially its restrictions on foreign borrowing. As a result, the number of financial institutions engaged in foreign currency denominated activities increased sharply. This process was accelerated (partly in order to meet OECD requirements) under the Kim Young Sam government, which came to power on February 23, 1993. During this period, controls on short-term external borrowings by banks were greatly eased, while the government maintained quantity restrictions on medium- and long-term foreign borrowing as a means of capital flow management. That is, the Korean government provided financial institutions real incentives to borrow for the short-term by making it mandatory for them to notify authorities of long-term foreign debts, whereas short-term loans regarded as trade-related financing were hardly regulated. Helped by the strong earnings and the eased control on short-term external borrowing, Korea's big businesses, in particular the *chaebols*, undertook an aggressive investment drive. This investment drive was financed mainly by large increases in borrowing from domestic banks, merchant banks in particular. As a result, the number of merchant banks and the volume of their foreign currency business expanded rapidly. From 1994 to 1996, a total of 24 finance companies were made into merchant banking corporations, which meant a corresponding increase in the number of participants in international financial markets, because merchant banks were allowed to engage in foreign-exchange transactions while finance companies were not. During the same period, Korean banks opened 28 foreign branches, which gave them greater access to foreign funds. These changes in the institutional framework contributed greatly to the rapid growth in foreign-currency borrowing. Moreover, financial liberalization and tight monetary policy (which kept domestic interest rates above world interest rates), only encouraged commercial and merchant banks to rely heavily on cheaper foreign credit — perceived to be cheaper because of the pegged exchange rate. As Sylvia Maxfield aptly notes, "after the financial market was deregulated, newly licensed Korean merchant banks and *chaebols* began to borrow internationally with all the self-restraint of children let loose in a candy store."¹⁷

However, the excessive investments in capacity expansion during the boom years of the early nineties soon caught up with the *chaebols*. The high leverage ratios of the *chaebols* and their low profitability made them extremely vulnerable to any shock to their cash flow. In

turn, the health of the banking system was highly dependent on the viability of the *chaebols*, as the banks were exposed to the *chaebols* both directly through loans and discounts and indirectly through the guarantee of corporate bonds and commercial paper. Financial liberalization also played a major role in producing the deterioration in financial sector balance sheets. Specifically, while regulations on financial institutions were being relaxed in order to enable them to engage in a wider set of activities, an implicit government safety net for financial institutions along with weak prudential supervision led to excessive risk-taking. Inevitably, the result was the growing bad loan problems and deterioration of financial institutions' balance sheets. It is now recognized that what helped produce a deterioration in both financial and non-financial balance sheets was the tradition of the government's coming to the rescue of troubled corporations and financial institutions, not to mention government involvement in the credit market, which created the impression that the *chaebols* were simply "too big to fail." These conglomerates had huge leverage, and lending to them increased in the 1990s, despite the weakness of their profitability. Banks and other financial institutions kept lending because they expected that the government would not allow the *chaebols* to go bankrupt - thus, in effect, guaranteeing their loans. Moral hazard was a bigger problem for the non-bank financial institutions, many of which were owned by the *chaebols*. Since these institutions were largely independent of the government, supervisory standards and the monitoring of prudential regulations were extremely lax. They soon developed major maturity mismatch problems.

During 1996-97, several highly leveraged *chaebols* failed and went into bankruptcy. The slowing domestic demand coupled with deteriorating movement of Korea's terms of trade could not support the economy burdened with the excessive buildup in capacity. The resulting bankruptcies of a number of major companies, in addition to increasing failures of medium and small businesses, resulted in the deterioration in the balance sheets of Korea's financial institutions — resulting in a rapid decline of their international creditworthiness. As the structural weaknesses and the government's inability to cope with them became exposed following the string of large corporate defaults in early 1997, foreign investors began to take a fresh look at Korea. Arguably, the deepening crisis in Southeast Asia was the last straw. The collapse of the Thai baht in July 1997 increased the concerns of foreign creditors about the strength of Korea's corporate sector and the soundness of its financial system, despite the Korean government's repeated attempt to calm foreign creditors. The Hong Kong stock market turmoil in late October 1997 triggered a sudden loss of market

confidence. The capital inflows that had helped to finance Korea's rapid economic growth were sharply reversed. Jittery foreign investors, many reeling from losses in other East and Southeast Asian economies, decided to lower their exposure to Korea and pulled their funds en masse, thus contributing to the severity and duration of the crisis.

Korea's economic crisis erupted as a speculative attack on the won in a context of very low foreign exchange reserves. Because the government had allowed foreign finance to enter through the banking system while continuing to limit inward FDI and foreign purchases of Korean securities, it ended up with liabilities that were owed to foreigners and denominated in foreign currency. Under these circumstances, the capacity of the government and central bank to lend in the last resort was limited by the stock of international reserves. By the end of 1996, short-term external liabilities as a share of foreign exchange reserves had risen to some 300%.¹⁸ Thus, the Korean crisis was not a *current account*, but a *capital account* crisis. Conventional current account crises are caused by the deterioration of domestic macroeconomic fundamentals, such as price inflation, fiscal deficits and low rates of saving. A capital account crisis is characterized by massive international capital inflows, usually large enough to surpass the underlying current account deficit and composed mainly of short-term borrowings denominated in foreign currencies. This leads to currency and maturity mismatches, which adversely affect the balance sheets of domestic financial institutions. There is thus a dual financial crisis — a currency crisis due to currency mismatch that leads to international liquidity problems, and a domestic banking crisis resulting in credit contraction. Moreover, currency depreciation further aggravates the balance sheets of corporations by inflating the value of liabilities in domestic currency terms, thereby precipitating a currency and banking crisis. The Korean crisis also illustrates that although the alliance between the government, *chaebols*, and the banks had been in place since the 1960s, it was no longer compatible with Korea's integration into the global financial market. In sum, the Korean crisis reflected a fundamental structural misallocation of resources to which investors suddenly awoke when financial turmoil engulfed Asia. The withdrawal of funds from Korean banks and the ensuing crisis were simply triggers for a long-overdue process of industrial and financial restructuring.

Liberalization without Regulation

The Korean financial system comprises three main types of institutions: (a) commercial banks, (b) the specialized and development banks, and (c) nonbank financial institutions (NBFIs). In addition, there also exists an informal and unregulated financial market known as the

curb market.¹⁹ The commercial banks account for over half of the assets of the financial system. They are owned by small shareholders (prior to the crisis, no shareholder could own more than 4% of a nationwide commercial bank or more than 15% of a regional bank), and engage in both traditional short-term banking operations and long-term financing of the corporate sector, including leasing. Commercial banks comprise 16 nationwide banks, 10 regional banks, and numerous (52 as of September 1997) foreign banks. Commercial banking is highly concentrated with the top eight banks accounting for about two-thirds of commercial bank assets. The specialized and development banks (which are partly or wholly owned by government) were established in the 1950s and 1960s to provide funds to specific strategic sectors. They account for roughly 17% of financial system assets.²⁰

Prior to the post-1993 liberalization, the Korean government controlled all the internal and especially cross-border financial flows very tightly. Although there were financial liberalization measures introduced in the 1980s, these were limited in scope. For example, the fact that no shareholder was permitted to own more than 4% of a bank's equity resulted in fragmented ownership. In practice, this meant that the management of banks were not accountable to anyone, except to the government. Also, up until the 1990s, decisions regarding credit allocations that commercial banks could make were dominated by the government's policy of favoring investment loans to large corporations engaged in export activities. Foreign exchange transfers were heavily regulated: Korean nationals were not allowed to borrow freely on the international market, and the ability of foreign residents to buy, own, and sell domestic assets was limited. However, starting in the early 1990s, the Korean government began to relax its control over the financial sector and under the Kim Young-Sam government the liberalization process was greatly accelerated.²¹

Why did the Korean government pursue such far-reaching liberalization measures? There are several interrelated explanations. According to Ilpyong Kim and Uk Heon Hong, the Kim Young-Sam administration, enamored with *seggyehwa* (or globalization), "believed that only a full-blown market economy could build an economy competitive at the world level. Administrators therefore worked to increase the role of the private sector, to loosen the concentration of the *chaebols*, and further deregulate the financial markets."²² Also, Chang, Park, and Yoo compellingly note that by the early 1990s, the increased credit ratings of Korean corporations and banks in the international financial markets meant that the private sector began to regard government involvement in their foreign exchange transactions as a burden — and the "*chaebols* now hankered for greater freedom in their

investment decision-making."²³ Similarly, Lee notes that "the 1990s saw an increasing demand from *chaebols* for deregulation such as lifting the ceiling on their ownership of bank shares, financial opening for greater freedom in foreign borrowing, raising the aggregate credit ceiling, and so on."²⁴ Furthermore, the decision by the Kim government to apply for Korean membership in the OECD meant that Korea had to liberalize the country's financial markets substantially, in particular both the current and the capital accounts.²⁵ Beyond these domestic structural explanations are the external factors, in particular the continued pressure from the U.S. government for Korea to deregulate and open her financial markets. Yet, whatever the explanation, there is general consensus that the liberalization program was accompanied by extremely lax supervision and prudential regulation.

For example, a history of government involvement in bank lending decisions had hampered the development of a commercially oriented and sound banking system, besides creating a moral hazard. Within banks, lending decisions tended to be highly centralized, and the internal risk control structures as well as credit analysis skills and procedures did not mature fully. As a result, credit decisions tended to rely on collateral and inter-company guarantees, as well as informal government guidance, rather than projected cash flows. Loan review processes and management information systems were rudimentary. Thus, Balino and Ubide succinctly note that

although government involvement in bank lending decisions was gradually withdrawn, banks developed few skills in credit analysis or risk management. Lending decisions were still largely based on the availability of collateral rather than on an assessment of risk or future repayment capacity. Because of their large exposure and inadequate capitalization, banks were generally in a weak position relative to their *chaebol* clients. Reflecting the history of directed lending, banks did not insist on, or receive, full financial information from *chaebols*?

In addition, basic accounting, auditing, and disclosure practices were significantly below the best international practices. Commercial banks were under the direct authority of the Monetary Board (the governing body of the Bank of Korea) and the Office of Banking Supervision (OBS). However, specialized banks and NBFIs were under the authority of the Ministry of Finance and Economy (MOFE). This lack of a unified system of supervision and regulation, comprising both bank and non-bank financial institutions, created conditions for regulatory arbitrage and the development of risky practices.

Similarly, the standards for loan classification and provisioning were significantly more lax in Korea than in the other OECD countries. Non-performing loans were defined as loans that had been in arrears for six months or more compared to a standard definition of three months or more. Bad loans were defined as the portion of non-performing loans not covered by collateral. The classification system was based on the loans' servicing record and the availability of collateral without regard to the borrower's future capacity to repay. Banks also lacked good internal liquidity management controls, and regulations were not sufficiently stringent, especially in regard to foreign exchange. In order to ensure the liquidity of banks, the OBS required that long term loans (defined as those with a maturity between one and ten years), should be financed with funds with maturities of at least a year. However, banks were not expected to invest an amount equivalent to more than 100% of their equity capital in securities with maturities over three years. Moreover, all of these calculations included only domestic liquidity positions, not taking into account positions of overseas branches and off-shore funds — which accounted for more than 60% of the short-term external liabilities of domestic financial institutions in 1996. Yet, despite the growing maturity mismatches in banks' balance sheets that resulted from the capital account liberalization, no special consideration was given to the prudent regulation of liquidity management in foreign exchange. Finally, Korean banks were subject to considerable restrictions on product innovation, while controls on interest rates limited price competition. Labor laws made it difficult to reduce excess personnel. With little control over their credit policy or costs, and with relatively little concern about insolvency, the banks were usually more concerned with achieving profits through asset growth than in maintaining asset quality.

Another consequence of deregulation was the rapid growth of merchant banks. As noted earlier, many of these newly established merchant banks were previously (in the 1970s and 1980s) small-scale investment finance companies created to reduce the importance of the informal curb markets. However, with deregulation they simply changed their names and became merchant banks. In 1994, nine such merchant banks were established, and by 1996, 16 more were added to the group. At the end of 1996, there were 30 merchant banks in the country.²⁷ The merchant banks (which were the dominant lenders in the issuance and discounting of commercial paper) funded themselves by issuing bonds and notes and by inter-bank deposits and borrowing in foreign markets. As noted earlier, most of these newly established merchant banks were either owned or controlled by the *chaebols*. Similarly, the significant relaxation of restrictions on *chaebol*

ownership of other non-bank financial institutions such as life insurance companies and investment-trust companies enabled the *chaebols* to expand further and concentrate their financial operations.²⁸ Indeed, there were no effective laws to prevent excess concentration of lending. Korea did not have laws to restrict lending to multiple borrowers belonging to the same group. That is, different firms that belonged to the same *chaebol* family were treated independently. The result was a heavy concentration of lending. Finally, although the merchant banks often competed directly with commercial banks, they were subject to different regulatory regimes. In fact, the merchant banks faced far fewer regulatory restraints than the commercial banks, and therefore quickly developed some distinct vulnerabilities. For example, owing to the relatively lax regulatory supervision, merchant banks assumed a much higher interest rate and currency risk than the commercial banks. Their lending concentration inside affiliated groups was greater, and merchant banks usually lent without collateral — and thus had less protection in case of default.

Compounding this problem was the maintenance of tight monetary policy and the regulatory framework, which was explicitly biased towards short-term borrowing. That is, short-term loans regarded as trade-related financing were hardly regulated, whereas long-term borrowing was subject to much stricter restrictions, requiring one to provide detailed information, besides obtaining permission from the MOFE.²⁹ Also, since the government expected that the credit rating on bank loans of Korean companies would improve in the international financial market, it further induced financial institutions to transform long-term external debts into short-term debts. However, other "borrowers seem to have taken a 'wait and see' approach by continuously rolling over short-term loans rather than taking out long-term ones, an approach supported by the international lenders who were perfectly willing to roll over Korean loans until the eve of the crisis."³⁰ Overall, the bias toward short-term foreign borrowing only encouraged the development of large maturity mismatches in the banks' balance sheets.

Moreover, financial liberalization and tight monetary policy (which kept domestic interest rates above world interest rates) only encouraged commercial and merchant banks to rely heavily on cheaper foreign credit — or credit perceived to be cheaper because of the pegged exchange rate. No doubt, a pegged exchange rate in normal circumstances would eliminate the foreign exchange risk associated with foreign loans for domestic borrowers. However, Korea's exchange rate policies contributed to reckless foreign borrowing. Prior to the crisis, the Korean won was effectively tied to the U.S. dollar with very

little or predictable variation. Specifically, in March 1990, Korea adopted an approach to exchange rate management known as the Market Average Exchange Rate System (MAR). Under this system, the daily won/dollar rate was allowed to fluctuate each day within a band centered around the previous day's weighted average spot rate. The band width was initially set at plus or minus 0.2%. Between 1990 and 1996, the exchange rate was tightly managed, with the won depreciating fairly steadily by an annual average rate of 2%. The daily fluctuation band was gradually widened in the period before the crisis, reaching plus or minus 2.25% in 1996. In maintaining such a tight exchange rate, the Bank of Korea, in effect, absorbed the exchange rate risks on behalf of market participants. With little variation of exchange rates and high domestic interest rates, it is not surprising that *chaebols* and financial institutions increased their offshore borrowing, especially with short-term maturity loans. Moreover, although the exchange rate was not fixed, its undervaluation in a managed float system and relatively high interest rates at home had substantially increased the attraction of foreign borrowing. Yen-denominated loans became especially attractive in the couple of years before the crisis because the continuing decline in the value of the yen against the U.S. dollar lowered the real cost of yen loans to domestic borrowers.

The resultant wave of excessive short-term foreign borrowing was intensified by ineffective prudential supervision. Specifically, lax regulation of banks, in particular merchant banks (for example, there were no asset classification, capital, or provisioning rules for merchant banks), and the regulatory distortions which favored short-term borrowing, contributed heavily to the accumulation of short-term foreign debt, increasing bank vulnerability to maturity mismatch. As Chang, Park, and Yoo note, "leading this rapid build-up of short-term foreign debt were the inexperienced merchant banks."³¹ For example, in a period of almost three years, merchant banks managed to acquire US\$20 billion in foreign debt — 64% of which was short-term debt, while 85% of their lending was long-term. Overall, foreign debt jumped from US\$44 billion in 1993 to US\$120 billion in September 1997 (a 33.6% per annum increase between 1994-96), while the share of short-term debt (or debt with less than a year's maturity) in total debt rose from an already high 43.7% in 1993 to 58.3% at the end of 1996. However, these figures underestimate the actual size of the debt, since it does not include offshore borrowing of domestic enterprises and Korean banks and their overseas branches and subsidiaries.³² By the mid-1990s, low profits and soft lending combined to make the *chaebols* highly leveraged in terms of their debt/equity ratios. At the end of 1997, the top 30 *chaebols* had an unprecedented debt/equity

ratio average of 519%.

Economic Vulnerabilities: The Road to the Crisis

High as the foreign debt figure was, it was not necessarily at an unsustainable level. As noted earlier, in 1996, Korea's debt/GNP ratio stood at 22%, far below the World Bank's definition of "less indebted" (at 48%). Similarly, Korea's debt-service ratio of 5.8% was well below the critical 18% specified by the World Bank. Moreover, private corporate sector profligacy was not as widespread in Korea as it was in Indonesia or Thailand, nor was Korea highly exposed to real estate and property inflation. In fact, much of the foreign borrowing went into the tradeable sector and not to fuel speculative asset bubbles in the non-tradeable sector. Land prices, which had risen at a rapid pace in the second half of the 1980s, were basically stable in the 1990s. Instead, foreign borrowing primarily financed an expansion of industrial capacity. That is, the *chaebols* were investing in export industries with stable returns and in which they were particularly well represented — namely petrochemicals, petroleum refining, iron and steel, automobiles, electrical equipment, electronics and communications and shipbuilding. Yet, these only reflected part of the economic picture. Looming alongside were growing economic vulnerabilities.

Specifically, the heavy indebtedness of the *chaebols* (and their subsequent insolvency) are to be found in the investment boom of the early to mid 1990s. During 1994-96, facility investment in manufacturing rose by 38.5% per year. However, the investment boom was not uniform across sectors but concentrated in manufacturing. Within manufacturing, the bulk of the investments (65.7%) went to expand existing production lines, while a relatively small amount was allocated to corporate restructuring (15.5%). Moreover, investments in heavy and chemical industries grew at an annual rate of 43.1%, while the rate of growth for light industries was only 15%. Also, investments by large firms grew 45.7%, while small- and medium-size enterprises increased their investments by 17.7%. In sum, the boom was dominated by the large *chaebols* investing in heavy industries such as steel, automobiles, petrochemicals, and electronics.³³ However, this boom soon resulted in gross over-investment. That is, in the absence of investment coordination, it was only a matter of time before over-investment would lead to overcapacity and declining profitability. Indeed, the profit rates (return on assets) in the manufacturing sector had fallen continuously from over 4% in 1988 to 0.9% in 1996. The decline of rates of return to capital during this period was caused at least in part by excessive and misallocated investment. In addition, using firm level data in eight major industries, Bailey and Zitzewitz

have shown that much of the rapid growth in the Korean economy could be accounted for by input growth rather than by productivity increases, and that the returns to capital (or profit rates) of Korean firms were lower than those of American and Japanese firms.³⁴ Similarly, a study by Borensztein and Lee found that many *chaebols* recorded little or no profit in 1996. Hence, by 1996, Korea's corporate sector was characterized by low levels of profitability and high levels of debt — reflecting the tendency of the *chaebols* to diversify into capital-intensive industries using short-term bank loans.³⁵ Banks, on the other hand, carried substantial non-performing loans and inadequate capital-asset ratios. Borensztein and Lee aptly note that Korea's economic performance in recent years "is one of economic growth sustained by higher and higher levels of investment even in the face of declining productivity of capital and almost vanishing corporate profitability."³⁶

The aggressive borrowing, especially of short-term foreign loans, had dire consequences. While there is nothing intrinsically wrong in borrowing from abroad to finance rapid industrialization, it is necessary to apply risk management to those foreign loans. First, in Korea, banks were exposed to large maturity mismatches in their foreign currency operations because they relied on foreign currency denominated short-term borrowing to fund long-term domestic currency denominated loans. The ratio of short-term external debt to total external debt was over 50% prior to the crisis, leading to a sharp mismatch between the short-term debts and official foreign reserves. In fact, the ratio of short-term external debt to official foreign reserves increased continuously in the 1990s, reaching an unprecedented high of 252% in 1997. Second, many of the foreign loans (which were short-term debts denominated in foreign currencies) were without an appropriate hedge. Third, the continued government support of industrialization through foreign debt was not accompanied by any improvement in the transparency of accounting standards in the leveraged *chaebols*. In fact, prudent regulation and supervision simply failed to keep up with the increasing concentration of risk in the domestic financial system. Not only were the banks lax in examining the large-scale investment project loans for which bank credits were requested by *chaebols*, but formal feasibility studies and risk analysis were also lacking. More often than not, bank managers decided on credit extension according to the size of borrowing firms under the assumption of the "too big to fail" argument. Further, the banks did not bother to check into possible misuse of loans by borrowers in the form of financial contributions to politicians and political parties, while foreign investors provided funds to domestic financial institutions without due vigilance since they were perceived as having implicit government guarantees.

Reflecting this lack of consolidated supervision, the increasingly risky activities of the merchant banks and other non-bank financial institutions, as well as the overseas subsidiaries and foreign branches of domestic financial institutions, were largely overlooked. The ill-experienced managers in merchant banks and financial companies were prone to allowing high-risk exposure due to their inability in managing short-term foreign capital. Without effective supervisory regulations, the merchant banks engaged in increasingly risky business — for example, investing in high-yield foreign junk bonds with funds borrowed cheaply, using Korea's high credit rating in international financial markets. Thus, they exposed themselves to significant interest rate, currency, and credit risks. Indeed, when foreign lenders started to recall loans in late 1997, these assets turned out to be illiquid. Finally, the liberalization of foreign exchange transactions on the current account allowed exporters to avoid depositing their foreign exchange revenues with the Central Bank. As a result, foreign exchange deposits in the commercial banks declined sharply, the build-up of short-term foreign debt far exceeding Korea's foreign exchange reserves.

The economic boom began to slow by the mid-1990s. Industrial output growth slowed from an annual growth rate of 14% in 1995 to 10% in 1996. Growth in manufacturing sales declined from 20% in 1995 to 10% in 1996. More troubling, Korea's export engine slowed significantly due to its deteriorating international competitiveness and the currency devaluation by China and Japan — Korea's major competitors in the export market. Korea simply could not effectively compete against Japan for high-valued products and against China for low-value goods.³⁷ As the world export demand receded, the *chaebols* suffered heavy losses. In particular, the slowdown in international trade in semiconductors (especially the memory chips market), office automation equipment, and consumer electronics, which began to slow imperceptibly in 1995 but reached crisis proportions by early 1997, severely hurt the Korean economy which had invested heavily in it.³⁸ Noble and Ravenhill note that "Korean companies ignored the softening demand for 4 MB and 16 MB chips in the mid-1990s and continued to expand production capacity."³⁹ The 16-megabyte memory chip, which accounted for approximately 20 percent of Korean exports, saw its price tumble from a high of more than US\$50 to under US\$7 by mid-1997, due to a world-wide glut, declining demand, and the entrance of new competitors (in particular, Taiwan and Singapore) in the marketplace.⁴⁰ By mid-1996, the unit price of semi-conductors had fallen by more than 70%, which was alone estimated to have decreased the value of Korean exports by more than US\$ 10 billion or over 2% of GDP, severely affecting the top three semiconductor companies:

Samsung Electronics, Hyundai Electronics and LG Semiconductors.⁴¹ Since the *chaebols* financed the construction and expansion of costly multi-billion dollar chip-fabrication factories known as "fabs" with massive doses of short-term dollar-denominated loans, they now faced an impending financial disaster as the huge losses in this critical sector mounted. Compounding the problem was the weakening profitability associated with cyclical downturns in sectors such as autos, shipbuilding, labor-intensive textiles, and steel.⁴² All this not only resulted in deteriorating terms of trade (during 1996-97, Korea's terms of trade deteriorated by more than 20% cumulatively), but it also severely constrained the *chaebols'* ability to cross-subsidize their investments.⁴³

As the new year began in 1997, foreign investors began to take a closer look at Korea — not only because of the unexpectedly sharp economic slowdown, but also because Korea's current account deficit of 5% in 1996 (the largest in five years) raised concerns. Then on January 23, the *chaebol* Hanbo Steel and Construction declared bankruptcy with a total estimated debt of US\$6 billion spread across 61 banks and non-bank financial institutions. On February 19, Moody's lowered the long-term ratings of three Korean banks (Korea Exchange Bank, Korea First Bank and Cho Hung Bank), all of which had substantial exposure to the Hanbo Group. However, this was just the beginning. Hanbo's collapse was followed by four more large *chaebols*, Sammi Steel on March 19 (with a 2.3 trillion won debt, 33 times its capital base), the Jinro Group (with a 3 trillion won debt) on April 21, Dainong in May and Ssangyoung in June. Each went into bankruptcy, dragged down by excessive investment, declining profits, and a substantial debt burden. As noted earlier, because of the cross-guarantee of debts among the affiliated firms of a *chaebol* group, the bankruptcy of one affiliate firm led to the bankruptcy of other affiliated firms. Moreover, these large corporate insolvencies inevitably undermined the health of the financial institutions with large exposure to these conglomerates.

The growing economic turmoil in the region, especially the collapse of the Thai baht on July 2, 1997, and the subsequent contagion to other regional currencies pegged against the U.S. dollar, brought Korea's growing financial and corporate sector problems into sharper focus. When on July 15, Kia Motors, Korea's third largest car-maker and eighth-largest *chaebol*, asked for emergency loans to avoid bankruptcy, the credit agencies immediately began downgrading ratings for several major Korean banks as they estimated that the fiscal bailout for the banking system would cost as much as 20% of GDP. In the face of the growing crisis, the Kim Young Sam government remained

indecisive — if not paralyzed. Although the Bank of Korea had alerted President Kim of the danger of a foreign exchange crisis as early as July 1997, "the Ministry of Finance and Economy (MOFE) and the presidential economic secretary downplayed it by emphasizing the 'healthy fundamentals' of the macroeconomy. Kim's aides thought they could put off the IMF bailout until Kim's tenure was over. His poor monitoring and mismanagement aggravated the crisis by mis-timing effective intervention."⁴⁴ Thus, an indecisive and discredited president (the result of the Hanbo scandal), coupled with a divided ruling party, pervasive intra-bureaucratic fragmentation, and an opposition resistant to reform legislation, produced political gridlock and policy incoherence. Finally, after weeks of sending mixed signals, the government began to take action. In early August, the government announced a set of measures aimed at increasing confidence in the Korean financial market. First, official support was provided by the Bank of Korea in the form of special loans and capital injection in exchange for government bonds to Korea First bank. In addition, a special funding facility was created to assist 21 merchant banks (out of the 30), whose exposure to bankrupt companies exceeded 50% of their equity. Second, the government announced guarantees covering the foreign liabilities of Korean financial institutions, including both commercial and merchant banks. And, third, more funds were earmarked for the Korea Asset Management Corporation (KAMCO), to which banks would be allowed to sell their non-performing loans.⁴⁵

It is now clear that the markets perceived these measures as insufficient. In October 1997, Standard and Poor downgraded Korea's sovereign status, making it difficult for Korea's private sector to obtain foreign currency funds. Indeed, by the fall of 1997, the balance sheets of Korean financial institutions had deteriorated severely. The share of non-performing loans in total assets of commercial banks had increased by about 70% between December 1996 and September 1997 — and amounted to about 80% of bank capital. As a result, the net worth of many financial institutions fell perilously low, and a significant shortfall in capital adequacy emerged. Of the 26 commercial banks, 14 had capital adequacy ratios below the norm, of which two were deemed to be technically insolvent. In addition, 28 of the 30 merchant banks had capital adequacy ratios below 8% and 12 were deemed technically insolvent. Park and Rhee carefully illustrate the fact that the Korean government "made a critical mistake" when it decided to bail out the near-bankrupt Kia group on October 22. "This was the moment that Korea's private banking crisis officially turned into a sovereign one."⁴⁶ Standard and Poor harshly criticized the Korean government's decision to bailout Kia — and Korean bonds tumbled to junk levels as investors

became nervous that the world's eleventh largest economy was heading for a Mexican-style crisis.

By mid-October, it was clear that not only were the foreign banks reluctant to roll over short-term loans, the massive outflow of capital continued unabated. The Bank of Korea tried to intervene in the exchange market with its foreign reserves in order to restore confidence. This meant that now a part of the current account deficit had to be financed from central bank reserves — and soon the central bank reserves began to fall rapidly as private capital inflows virtually vanished. Even before the collapse of Yamaichi Securities (Japan's fourth largest securities company), and the bankruptcy of Japan's Takushoku Bank on November 15, Japanese banks began to call in their loans from Korea, precipitating a liquidity crunch for the Korean banks.⁴⁷ As the merchant banks' weakest borrowers began going bankrupt, foreign and Korean commercial banks further curtailed their lending. To stay afloat, the merchant banks were forced to call in loans — causing more bankruptcies. They bought up dollars or yen with won to pay their foreign currency debts, and these won sales contributed to the drastic decline of the won's value.

Ever since the first quarter of 1997, the Bank of Korea had actively intervened in the foreign exchange market to uphold the value of the won. However, this intervention also contributed to the rapid depletion of foreign reserves. Why did the government try to uphold the value of the won despite a growing current account deficit? In large part the answer is that authorities expected the current account balance to improve soon and worried that a devaluation would trigger inflation and increase the debt service burden of the private sector. After October, domestic financial institutions found it extremely difficult to roll over their loans. As a result, Korean banks and corporations had to buy dollars in the domestic exchange market to service their external obligations. It also meant that the central bank had to supply foreign exchange to banks in the form of deposits at overseas branches.⁴⁸ However, the supply of foreign exchange declined sharply with the expectation of a won depreciation. In this quickly deteriorating environment, the Korean authorities made another fatal mistake by wasting a substantial part of the country's foreign reserves in the futile foreign exchange market intervention. That is, instead of letting the won float, the Korean government tried to defend it by spending approximately US\$15.1 billion in October and November. Korea's liquid foreign reserve, which was US\$22.4 billion in early October, dropped to a paltry US\$7.3 billion by mid-November. According to an IMF study, Korea's usable foreign exchange reserves fell dramatically in November at a rate of US\$1 billion to US\$2 billion daily, bottoming

out at around US\$5 billion by the end of the month.⁴⁹ Although the central bank of Korea tried to calm the financial markets by announcing that its reserves were around US\$30 billion, the strategy backfired. Foreign investors estimated that the actual reserves were as low as US\$ 15 billion — which totaled about five weeks' worth of imports and only a fifth of Korea's short-term debt. Cognizant of the fact that the announced reserves did not include dollars borrowed through forward market intervention, and recalling that Thailand had committed as much as two-thirds of its reserves in this way, the Korean government's lack of candor cost it credibility, besides fueling rumors among international financial investors regarding the actual amount of Korea's usable foreign exchange reserves. By the end of November, six of the top 30 *chaebols* had filed for court protection, and a seventh went into bankruptcy in December. These large bankruptcies, together with rising bankruptcies among small- and medium-sized enterprises, significantly damaged the asset position of financial institutions.

In early November, the Korean authorities had widened the won's daily fluctuation band to plus or minus 10%. However, on November 16, Korea finally abandoned its defense of the battered won and allowed the exchange rate to float freely. This sent the currency crashing through the psychological 1,000/dollar level with shock waves hitting the baht, the rupiah, the ringgit and other regional currencies which fell even further relative to the dollar. Referring to the problem as a "temporary funding shortage" in which the "idea of IMF aid as unthinkable," the affable new Finance and Economy Minister Lim Chang-Yuel announced that the government would form an emergency economic presidential advisory committee to solve the nation's financial problems, and, on November 19, he unveiled an emergency financial bailout package.⁵⁰ However, seen as "too little to late," the measure failed to restore market confidence, and on November 20, the won fell by another 10 percent to 1,139 won per dollar; with some US\$65 billion in short-term debts (mostly held by *chaebols*), the country now teetered on the brink of defaulting on its debt repayments. Following marathon all-night negotiations with the IMF team, the weary and somber-looking finance minister in a nationally televised press conference (on November 21) reluctantly announced that Korea would seek emergency financial assistance from the IMF.

However, with Korea's presidential elections to be held later in December 1997, the IMF made it clear that its support would be contingent upon all presidential candidates approving (in writing) the terms of the IMF agreement. This was done because one of the candidates, Kim Dae-Jung, had made it clear that his government would renegotiate the terms of the IMF rescue package if the level of

unemployment and corporate bankruptcies turned out to be too high. In this climate of uncertainty, the won dropped to 1,800 won to the U.S. dollar in early December and to 1,962 won per dollar on December 23. However, after some two weeks of tense negotiations, Michel Camdessus, Managing Director of the IMF, announced on December 4, 1997, that the IMF and the South Korean government had signed a three-year standby arrangement under which the IMF had agreed to provide a record-breaking US\$57 billion rescue package to South Korea. Seoul would receive the first payment of US\$5.6 billion immediately, with the second portion forthcoming after December 17, following review of Korea's adherence to the comprehensive economic reform program underpinning the loan.⁵¹ Moreover, the IMF plan (coupled with the suasion of G-7 governments), Japanese, European and American banks agreed to roll over their maturing short-term loans (with the intent of converting them subsequently into long-term bonds) through March 1998, giving the Korean government the much needed breathing space to negotiate a more comprehensive restructuring package. On January 28, 1998, the Korean government and the banks reached agreement on the rescheduling of some US\$24 billion in short-term debt owed by Korean companies and on a plan to replace the bank loans with sovereign-guaranteed bonds. This enabled the country to avoid defaulting on the repayment of its short-term foreign debts. Although after signing the IMF agreement President Kim Young Sam publicly conceded that "we have lost our economic sovereignty," he nevertheless stated with unusual candor that his government would honor the stringent IMF conditionality and pleaded with the nation to endure humiliating and "bone-carving pain." On December 18, 1997, Kim Dae-Jung was elected president of Korea. On accepting his electoral victory, he too promised to implement the conditions attached to the IMF program.

The IMF Program The financial crisis had a devastating impact on the Korean economy, causing Korea's worst recession in the post-war period. As noted earlier, real GDP growth fell from levels which had been running in the positive 7-12% range before the crisis to a negative 5.8% in 1998. Worse still, per capita income declined from US\$10,543 in 1996 to US\$9,511 in 1997, bankruptcies soared during the first half of 1998, the losses of Korean listed companies reached historical records (about 14 trillion won in the first half of 1998), and unemployment rose from pre-crisis levels of 2% to 6% in 1998 and to 8.1% in March 1999 — the highest in 30 years. To halt the spiraling economic decline and jump-start the faltering economy, the Kim Dae-Jung administration (which took office in February 1998) committed itself to the IMF's program of macroeconomic adjustment and

structural reform. In fact, the Kim Dae-Jung government did more than accept the very tight monetary and fiscal policy stance proposed by the IMF. The government closely worked with the IMF and the World Bank to devise a wide-ranging and politically challenging structural adjustment program designed to address outstanding problems in the financial and corporate sectors.⁵²

Although the IMF-sponsored program underwent several revisions, it consisted of three basic elements: macroeconomic stabilization, financial and corporate sector reforms, including comprehensive dismantling of the old financial system, and further measures related to trade liberalization, capital account liberalization, and labor market reform. The immediate task facing the IMF was to achieve macroeconomic stability and restore confidence in the currency. To do this the IMF program required that: (1) money supply be squeezed, or at least be limited to a rate consistent with containing inflation at 5% or less; (2) the government maintain a balanced budget by reducing its spending level to match its tax revenue — which was expected to decline; (3) that the exchange rate be determined by market forces; and (4) interest rates be allowed to rise to the highest possible level to stem capital outflows and discourage speculation. On December 22, the statutory ceiling on interest rates was raised from 25% per annum to 40%), and the high interest rate policy continued throughout the first two quarters of 1998; the IMF program also required that (5) the government work hard to accumulate foreign exchange; and (6) a tight fiscal stance be maintained for 1998 to alleviate the burden on monetary policy and to provide for the interest costs of restructuring the financial sector.

In the area of financial sector reforms, the program was designed to: (1) restructure and recapitalize the banking system to address the problem of the stock of bad loans and the weak capital base. This meant decisively dealing with problem institutions and problem loans by closing down the former and by selling off the latter and substantially improving the health of the remaining financial institutions by injecting additional capital. Indeed, at the outset of the program, in order to maintain public confidence, the government guaranteed all deposits of financial institutions until the year 2000 and suspended the operation of 14 insolvent merchant banks. In addition, two commercial banks were placed under supervision, while all remaining financial institutions were required to submit plans for capital restorations needed to meet the Basle standards. The program also sought to (2) strengthen the disclosure rules, enforcing transparency requirements and establishing a prudential regulatory framework in order to prevent the recurrence of similar problems. To this effect, the Korean National

Assembly passed a revised Bank of Korea Act in December 1997 to provide for the independence of the central bank. Laws passed in December 1997 also consolidated all financial sector supervision (for banks, non-bank financial institutions, insurance and securities markets) in a single and independent Financial Supervisory Commission (FSC), separate from the government, and merged all deposit insurance protection agencies into a newly established agency — the Korea Deposit Insurance Corporation (KDIC). Corporate sector reforms were explicitly designed to reform the *chaebols* by (1) reducing their high-debt/equity ratios; (2) ending intra-group debt guarantees; (3) requiring *chaebols* to divest themselves of non-profitable activities; and (4) requiring transparency of balance sheets through the enforcement of independent external audits, full disclosure, and consolidate statements for all conglomerates, including the publication and dissemination of key economic and financial data — giving them until 2000 to comply. In the area of economic liberalization, the IMF urged Korea to open up the economy rapidly and completely — with open trade in commodities, services, intellectual property rights, and foreign exchange. In fact, under the arrangement trade was to be liberalized by setting a timetable in line with World Trade Organization commitments to eliminate trade-related subsidies. Capital flows were to be completely opened and the capital account transactions substantially liberalized. Specifically, the capital account was to be liberalized by opening up the Korean money, bond and equity markets to capital inflows and liberalizing foreign direct investment. Labor market reform was also required to facilitate the redeployment of labor.

However, the IMF-mandated program, in simultaneously pursuing structural reform and foreign exchange market stabilization, posed a fundamental dilemma. Specifically, in order to stabilize the foreign exchange market in the short run, contractionary fiscal and monetary policies were needed. On the other hand, expansionary policies were required to alleviate the pains from the credit crunch that inevitably accompanied structural reform. As it turned out, although the IMF program helped to restore some measure of international investor confidence, it also produced severe negative economic shocks. Devaluation and high interest rates produced recession and inflation. Consumer prices rose from an annual rate of 4.5% in 1997 to roughly 20% during the first two months of 1998, unemployment increased sharply from 0.5 million to 1.3 million, and the exchange rate, which had dropped to near 2,000 won per U.S. dollar on December 24, 1997, improved only modestly, fluctuating around 1,600 to 1,700 won per dollar in mid-January 1998. Moreover, as banks became reluctant to provide new loans to firms in order to meet their Basle requirements,

the number of bankrupt firms jumped from 1,000 per month in September 1997 to 3,000 per month by December 1997 — taking an indiscriminate toll on both weak and healthy firms alike. In turn, company bankruptcies led to the insolvency of financial institutions and scared off foreign investors, decreasing the inflow of foreign capital.

Even as the IMF program was being implemented, Jeffrey Sachs pointed out that, in the case of Korea, there was not need for tight monetary and fiscal policy since Korea's macroeconomic policy was sound, with "the budget in balance, inflation is low, the savings rate is high, and the economy is poised for export growth."⁵³ According to Sachs, the IMF had gravely misjudged the Korean crisis by equating it with the Mexican peso crisis. However, while Korea and Mexico suffered from the same liquidity problems, the causes of the crisis were not the same. In the case of Mexico, it was profligate spending and consumption, while in Korea it was highly leveraged investment burdened with short-term debts. By applying the same prescriptions it did during the peso crisis, the IMF severely aggravated the Korean crisis. Because of this miscalculation, the sharp increases in interest rates failed to stabilize the exchange rate — which quickly depreciated far below the targets set in the IMF program. In agreement with Sachs, Kihwan Kim added that the IMF's decision to release its funds in small increments was shortsighted "as foreign banks judged these amounts to be altogether inadequate, particularly for Korea's need to meet its short-term obligations." No wonder the foreign banks "accelerated the withdrawals of their funds from Korea, thus pushing the country to the verge of a sovereign default in less than 10 days after the initial agreement was signed."⁵⁴ Both Sachs and Kihwan Kim noted that the IMF's high interest rate policy had disastrous consequences. The high interest rates were recommended on the rationale that they would serve to bring in foreign capital and discourage the outflow of funds — thereby stabilizing the exchange rate. However, coupled with the sharp devaluation of the won, the immediate effect of the high interest rate policy was to increase the debt burden carried by Korean businesses. Given the fact that Korean companies were highly leveraged, the high interest rates drove an usually large number of firms into bankruptcy. Kihwan Kim pointed out that the IMF's demand that Korean financial institutions meet their BIS capital adequacy ratio in a very short period of time "resulted in a credit crunch of unprecedented proportions. As all banks and financial institutions were preoccupied with the need to improve their BIS ratios, they not only ceased to make new loans but hurriedly recalled their outstanding loans as well. This, more than anything else, was responsible for the sharp contraction of economic activities during the first three quarters of 1998."⁵⁵

Martin Feldstein⁵⁶ also severely criticized the IMF program, arguing that the traditional prescription of budget deficit reduction and a tighter monetary policy (which together depress growth and raise unemployment), was inappropriate for Korea, given that its national savings rate was already one of the highest in the world. He stated that Korea was

a case of temporary illiquidity rather than fundamental insolvency ... what Korea needed was coordinated action by creditor banks to restructure its short-term debts, lengthening their maturity and providing additional temporary credits to help meet the interest obligations ... Although many of the structural reforms that the IMF included in its early-December program for Korea would probably improve the long-term performance of the Korean economy, they are not needed for Korea to gain access to capital markets.

Rather, the IMF's primary task should have been to persuade foreign creditors to continue to lend by rolling over existing loans as they came due. Given the fact that Korea had the advantage of a relatively strong economy, this arguably would not have been very difficult. By highlighting the fact that Korea's lack of adequate foreign exchange reserves was a temporary shortage, not permanent insolvency, the IMF may have been able to persuade creditors to exercise forbearance.

As noted earlier, the IMF was able to get the creditors to roll over Korea's debt through March of 1998. From the IMF's perspective, tight monetary policy was needed to restore investor confidence, and high interest rates were necessary (particularly at the outset) to stabilize the exchange rates and restructure the corporate sector. No doubt, regarding monetary policy, the IMF arrangement achieved its basic objective in curbing the depreciation-inflation spiral. The high interest rates that the Korean authorities were forced to maintain to encourage the markets to take up the sovereign-guaranteed bonds helped avoid default—which also facilitated the rapid restoration of the country's creditworthiness.⁵⁷ However, in retrospect, there is little doubt that the IMF's program was too contractionary in the short run, thereby making it very costly to implement structural reform. The IMF in pursuing tight monetary policies, while simultaneously requesting Korean banks to observe, within a short period of time, the capital adequacy ratio set by the BIS, unleashed problems. Fearful of the penalty they would receive in case they could not meet the ratio, banks rushed to withdraw loans from companies, thereby deepening the credit crunch and pushing interest rates up even further. This drove many firms, including profitable but highly leveraged firms, into bankruptcy. This, in turn, lowered the capital base of banks due to the losses, which only speeded up foreign

banks' collection of loans from the Korean banks, since they became fearful of the growing insolvency of the Korean banks.³⁸ Moreover, the decision to permit the exchange rate to continue to float rather than readjusting the pegs to rates deemed defensible only opened the door to continued market depreciation. No wonder the high interest rates failed to attract foreign capital as the credit risk involved in the payment of principal was too high. The Korean case vividly highlighted that the gap between domestic and international interest rates is not in itself a sufficient condition for stabilization of the exchange rate through interest arbitrage. Finally, as Sachs noted, in Korea the budget was balanced, with a slight surplus. Therefore, the IMF prescription of budget cuts (which is the standard way to deal with irresponsible governments running large deficits in their current accounts), was not only inappropriate for Korea, it also aggravated the crisis. Given this, it is difficult not to agree with the critics that the IMF's fiscal austerity program for Korea was fatally misguided.

Yet, and to its credit, the IMF seems to have recognized (although it did not admit) its mistake. Surprised by the sharp and unrelenting downturn of the economy, the IMF began to soften the stringency of its program. Beginning with the second quarterly review of the standby arrangement, on February 17, 1998, monetary policy was eased. The fiscal target for 1998 was lowered from a surplus of 0.2% of GDP in the original program (including bank restructuring costs) to a deficit of 0.8% of GDP. Although monetary policy was expected to remain tight as long as the exchange market situation remained fragile, the program, nevertheless, allowed for a gradual decrease in the interest rate and a slight increase in the growth of reserve money. As the won stabilized to the level of 1,350-1,400 won per dollar by the end of April 1998, it enabled the Korean government to lower interest rates below the 20% level — after consultation with the IMF. The program was also broadened to include measures to strengthen the social safety net by expanding the unemployment insurance system and increase labor market flexibility through public works and other programs. In the third quarterly review on the standby arrangement on May 28, 1998, the conditionality of the macroeconomic policies was adjusted in order to counter the recession and to strengthen the structural reform agenda. There was agreement to ease fiscal policy by increasing the target for the budget deficit to 4.0% of GDP. In the fifth program review signed on November 18, 1998, the deficit target was further increased to 5% of GDP.

Korea's three-year standby arrangement with the IMF expired on December 3, 2000. By then the macroeconomic fundamentals had improved considerably, especially the current account balances. The

sharp turnaround in current account balances also contributed toward a rapid accumulation of foreign exchange reserves (from US\$20.4 billion in December 1997 to US\$52.3 billion by December 15, 1998), thereby making the Korean economy more resilient to external shocks. The relatively speedy recovery of the Korean economy can be attributed to many factors such as the early resolution of creditor panic, the export-oriented industrial structure, the favorable external environment, the expeditious implementation of IMF-mandated structural reforms by the Kim Dae-Jung administration, and most importantly, the government's expansionary macroeconomic policies. Regarding the last point, it should be noted that in September 1998, the Korean government lowered interest rates, extended more credits to small- and medium-sized enterprises, and widened the fiscal deficit to revive the economy—despite criticisms from the IMF that a premature stimulus of the economy might undermine the restructuring process. Overall, while progress has been made in stabilizing the financial system, addressing corporate distress, strengthening the institutional framework for corporate governance and financial supervision, and enhancing transparency and the role of market discipline, many structural problems remain. There is much work yet to be done.

Conclusion

To sum up the preceding discussion of the various explanations of the Korean financial crisis, it is argued here that "financial liberalization without regulation" provides the most convincing explanation for Korea's full-blown financial crisis. The implications are clear: open financial markets offer both risks and benefits. The Korean experience illustrates the fact that effective monitoring and regulation of the financial liberalization process is necessary if emerging market economies are to resolve and avoid financial crises. It also means that corporate and financial sector restructuring and greater transparency in business-government relations is necessary before full-scale liberalization can occur. The fact that the Kim Dae-Jung administration has already taken steps to strengthen domestic regulation and supervision of banks and other financial intermediaries, to rebuild the information infrastructure of financial markets, and to improve corporate governance is a good sign.

Notes

1. Soon Cho, *The Dynamics of Korean Economic Development* (Washington, D.C.: Institute for International Economics, 1994).
2. After three years of careful analysis, South Korea became a member of OECD in October 1996.
3. For details, see World Bank, *World Development Report, 1999/2000* (Washington, D.C.: The World Bank, 2000a).
4. Mohamed Ariff and Ahmed M. Khalid, *Liberalization, Growth and the Asian Financial Crisis* (Cheltenham, U.K.: Edward Elgar, 2000), p. 63.
5. For example, the 3-year corporate bond yield (the benchmark interest rate) declined from an average of 15% during 1990-95 to 12% in 1996. For details, see World Bank, *Republic of Korea: Establishing a New Foundation for Sustained Growth* (Washington, D.C.: The World Bank, 1999).
6. Data is compiled from the Bank of Korea, *Statistics of the Korean Economy* (<http://www.bok.or.kr>) (1998), and Joon-Ho Hahm, "Financial System Restructuring in Korea: The Crisis and its Resolution," in Seiichi Masuyama, Donna Vandenbrink and Chia Siow Yue, *East Asia's Financial Systems: Evolution and Crisis*. (Singapore: ISEAS, 1999), pp. 109-143.
7. In the World Bank classification, a country is "less indebted" when the debt/GNP ratio is less than 48%; "moderately indebted" when the ratio is between 48% and 80%; and "severely indebted" when it is over 80%.
8. Ha-Joon Chang, "Korea: The Misunderstood Crisis," *World Development*, vol. 26, no. 8, (1998), pp. 1555-1561.
9. Ariff and Khalid, p. 62.
10. Sang-Mok Suh, "The Korean Economic Crisis" unpublished paper. Asia/Pacific Research Center. Stanford University, 1998.
11. The emergency financing mechanism (EFM) was established in September 1995. The EFM strengthened the IMF's ability to respond quickly in support of a member country facing an external financial crisis and seeking financial assistance from the IMF in support of a strong economic adjustment program.
12. Quotes from Nicholas Kristof, *The New York Times*, November 22, 1997, p. B2. It is important to note that all the three political parties and presidential candidates, Rhee In Je, Lee Hoi-Chang (the ruling party candidate) and long time dissident, Kim Dae Jung (who was slow to embrace the IMF package), all finally acceded to the IMF demands. In fact, because the crisis occurred in the middle of the presidential election campaign, the IMF made a very unusual request for a written endorsement of the IMF program from the three major presidential candidates. All three endorsed the program. Kim Dae Jung was elected president for a five-year term on December 18, 1997.
13. Giancarlo Corsetti, Paolo Pesenti and Nouriel Roubini, *What Caused the Asian Currency and Financial Crisis: A Macroeconomic Overview*, NBER Working Paper 6833, National Bureau of Economic Research, (Cambridge, Mass.: 1998).
14. Steven Radelet and Jeffrey Sachs, "The East Asian Financial Crisis: Diagnosis, Remedies and Prospects," *Brookings Papers on Economic Activity*, vol. 1(1998).
15. The concept of "reputational externalities" was developed by Zeckhauser. See Richard Zeckhauser. "The Muddled Responsibilities of Public and Private America" in Winthrop Knowlton and Richard Zeckhauser eds., *American Society: Public and Private Responsibilities*, (Cambridge, Mass.: Ballinger, 1986), pp. 45-77.
16. *Chaebols* are conglomerates of many companies clustered around one holding company. The parent company is usually controlled by one family. That is, the company founder and his family on average own about 10%, and through cross-shareholdings control another 30% to 40% of the group member firms in the top 30

- chaebols*. In 1998, the top 40 *chaebols* grouped a total of 671 companies. See, Kenneth Scott, "Corporate Governance and East Asia: Korea, Indonesia, Malaysia and Thailand," in Alison Harwood, Robert E. Litan and Michael Pomerleano, eds., *Financial Markets and Development* (Washington, D.C.: The Brookings Institution, 1999), pp. 335-365.
17. Sylvia Maxfield, "Capital Mobility and Democratic Stability," *Journal of Democracy*, vol. 11, no. 4, October 2000, pp. 95-106.
18. Tomas Balino and Angel Ubide, "The Korean Financial Crisis of 1997 — A Strategy of Financial Sector Reform," *IMF Working Paper*, March 1999, WP/99/28.
19. Although an accurate measurement of the size of the curb market is difficult to measure, estimates suggest that in the mid-1990s, the total lending in the curb market was between 2 to 5% of the total loans of the formal financial sector. In contrast, in the mid-1970s, the curb market was estimated to account for more than one-third of all credit extended in the economy. As noted earlier, curb market loans are characterized by high interest rates and risks — to satisfy the credit demands of individual households and small- and medium-size firms that have been excluded from the formal credit market. Balino and Ubide, p. 11.
20. Although specialized banks can borrow from the government, deposits constitute their main source of funding. Funding for development banks, which are wholly government-owned, come mainly from government-guaranteed bonds. Balino and Ubide, p. 9.
21. Chang, *op.cit.*, p. 1557.
22. Ilpyong J.Kim and Uk Heon Hong, "The Republic of Korea: The Taming of the Tiger" *International Social Science Journal*, March 2000, no. 163, pp. 70-71
23. Ja-Hoon Chang, Hong-Jae Park and Chul Gyue Yoo, "Interpreting the Korean Crisis: Financial Liberalization, Industrial Policy and Corporate Governance," *Cambridge Journal of Economics*, vol. 22 (1998), pp. 735-746
24. Chung. H. Lee. "Chaebol, Financial Liberalization and Economic Crisis" unpublished paper. University of Hawaii at Manoa (2000), p. 10.
25. Joining the OECD requires, as a precondition, free capital markets.
26. Balino and Ubide. p. 16.
27. Lee, "Chaebols, Financial" p. 11.
28. Before the deregulation, the top 15 *chaebols* were not allowed to own and control life insurance companies, while the next top 15 *chaebols* were allowed to have only up to a 50% ownership of life insurance companies. However, by May 1996, all *chaebols* but the top five were allowed to own or control life insurance companies. Also, before the deregulation only the commercial banks could own investment trust companies. However, in early 1996 the restriction was lifted.
29. It is important to note that short-term borrowing rates were lower than long-term rates, and short-term funds could be raised relatively easily through the international money markets. This resulted in domestic banks channeling external short-term funds to long term loans financing investments by domestic corporations.
30. Chang, Park and Yoo, *op. cit.*, p. 739.
31. *Ibid*, p. 738-9.
32. Daekeun Park and Changyong Rhee. "Currency Crisis in Korea: How was it Aggravated" *Asian Development Review*, vol. 16, no. 1 (1998), pp. 149-80.
33. Stephan Haggard and Jongryn Mo, "The Political Economy of the Korean Financial Crisis" *Review of International Political Economy*, vol. 7, no. 2, Summer 2000, pp. 197-218.
34. Martin N. Bailey and Eric Zitzewitz, "Extending the East Asian Miracle: Microeconomic Evidence From Korea" *Brookings Papers on Economic Activity: Microeconomics* (1998), pp. 249-308.

35. Eduardo Borensztein and Jong-Wha Lee, "Credit Allocation and Financial Crisis in Korea" IMF Working Paper no. 99/20, 1999.
36. Borensztein and Lee, *op.cit.*, p. 7.
37. During the period 1985-95, unit labor cost in manufacturing increased by 46.0% in Korea, while the corresponding figures were 22.1% in Japan, 25.1% in Taiwan and 4.4% in the United States. The situation became even worse when other countries such as China, Thailand, Malaysia and Indonesia adopted an export-oriented economic strategy. In the process, Korea was sandwiched between the developed countries (with their superior technological base), and the newly-industrializing countries, with their very low wages. As the dollar became stronger, particularly against the yen, Korea's export competitiveness suffered, and the country experienced an accelerated increase in its trade deficit.
38. The electronics exports declined from US\$43.6 billion in 1995 to US\$41.2 billion in 1996, an annual decrease of 5.5% after a 30.4% and 41.1% annual increases in 1994 and 1995. Bong Joon Yoon, "The Korean Financial Crisis, the Chaebol and Economic Reform" *Korea Observer*, vol. xxx, no. 3, Autumn 1999, pp. 411-441.
39. Gregory Noble and John Ravenhill. "The Good, the Bad and the Ugly"? Korea, Taiwan and the Asian Financial Crisis," in Gregory Noble and John Ravenhill, ed. *The Asian Financial Crisis and the Architecture of Global Finance* (New York: Cambridge University Press, 2000), p. 90.
40. See, "Semiconductors: Chips on their Shoulders," *The Economist*, November 1, 1997, p. 62.
41. In-June Kim and Yeongseop Rhee. "The Korean Currency Crisis and the IMF Program: An Insider's View" *Seoul Journal of Economics*, vol. 11, no. 4 (1998), pp. 351-380.
42. For example, Samsung spent 4 trillion won building a car manufacturing plant in Pusan when there was already an excess supply of cars, not only in South Korea, but in the world. With a capacity of 240,000 units per year, it sold only 60,000 units in 1998. Not surprisingly, Samsung Motors lost 156 billion won in the first six months of 1998. Its debt rose to nearly 4 billion won taking its debt/equity ratio to 555%.
43. Balino and Ubide, *op. cit.*, p. 28.
44. Chung-In Moon and Sang-young Rhyu, "The State, Structural Rigidity, and the End of Asian Capitalism" in Richard Robison, Mark Beeson, Kanishka Jayasuriya and Hyuk-Rae Kim eds., *Politics and Markets in the Wake of the Asian Crisis* (London: Routledge, 2000), pp. 77-98.
45. KAMCO was established in April 1997.
46. Park and Rhee, *op. cit.*, p. 171.
47. According to Kim and Rhee, p. 363, Japanese banks collected short-term lending of some US\$9 billion from Korea between October 1997 and December 3, 1997. See Kim and Rhee, *op.cit.*, p. 363
48. These deposits were not usable as foreign reserves.
49. Carl-Johan Lindgren, Tomas Balino, Charles Enoch, Anne-Marie Guide, Marc Quintyn and Leslie Teo. *Financial Sector Crisis and Restructuring: Lessons from Asia*. IMF Occasional Paper 188 (Washington, D.C.: International Monetary Fund, 1999).
50. Chang-yuel replaced Kang Kyong-shik who resigned after taking responsibility for the crisis. The quotes are taken from, Nicholas Kristof, "Seoul Plans to Ask the IMF for a Minimum of \$20 billion," *The New York Times*, November 22, 1997, p. B2.
51. Nicholas Kristof, "Package of Loans Worth \$55 Billion Set for South Korea," *The New York Times*, December 4, 1997, p. C6.
52. Stephan Haggard. *The Political Economy of the Asian Financial Crisis* (Washington, D.C.: Institute for International Economics, 2000).
53. Jeffrey Sachs, "The IMF is a Power unto Itself" *The Financial Times*, December 11, 1997.

54. Kihwan Kim. "The Korean Financial Crisis: Causes, Response and Lessons" in Joseph R. Bisignano, William C. Hunter and George G. Kaufman eds. *Global Financial Crises: Lessons from Recent Events*. (Boston: Kluwer Academic Publishers, 2000), pp. 201-208.
55. Kihwan Kim, p. 205.
56. Martin Feldstein, "Refocusing the IMF," *Foreign Affairs*, Vol. 77, No. 2, March/April 1998, pp. 20-33.
57. Korea was able to re-enter international capital markets as early as May of 1998.
58. As the economic recession grew worse and corporate bankruptcy multiplied, the IMF, it seems, finally realized its mistake, and in May 1998 granted permission to the Korean authorities to lower interest rates and to ease the money supply. However, the damage was already done.