# 1. Introduction

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Of all the countries to fall prey to the Asian financial crisis, South Korea was the most unexpected. Korea was an industrial and export powerhouse, by some measures the eleventh largest economy and twelfth largest exporter in the world.[1] It was one of the world's leading producers of semiconductors and computer disk drives. Its economic coming of age was acknowledged in 1996 by its admission to the Organisation for Economic Co-operation and Development (OECD), the club of high-income countries. That a country that had moved so far in the direction of economic maturity could be brought to its knees by a financial crisis pointed up doubts about the viability of the 'Asian model' of economic development and the 'Washington consensus' of economic and financial liberalization – or at least about their compatibility with one another.

The impact of the crisis was profound. This refers not simply to the sharp drop in output and the alarming rise in poverty and unemployment that occurred as events unfolded. At a deeper level the crisis provoked far-reaching changes in Korean economy and society. The Korean financial system was fundamentally reshaped by merger, consolidation and closure. A number of the country's leading industrial conglomerates were dismantled, and their viable lines of business were spun off to other companies. There was a transformation of Korean society, reflected in deepening class divides and a weakened labor movement.

Five years after the onset of the crisis, the Korean economy is recovering robustly. Growth is running in excess of 5 percent per annum, not far below the 'miracle' rates of the pre-crisis era.[2] Now the problem for the Korean authorities is not a weak exchange rate but an excessively strong one, as investable funds, attracted by what is once more an admirable record of economic performance, flood into the country.

This book is an attempt to better understand these three stages of the Korean crisis: the onset, the policy reaction, and the economic response. The goal, in a nutshell, is to explain how South Korea succumbed to the crisis, how it coped, and how it recovered.

## THE HISTORICAL CONTEXT

Answers to these questions can only be framed by placing Korean economic development in its historical context. As late as 1960, South Korea was a heavily agrarian, desperately impoverished economy, most of whose residents lived close to the margin of subsistence. The country had little arable land, high population density and few natural resources. Still recovering from the effects of civil war and foreign military involvement, the South never felt entirely secure from the threat of renewed attack from the North.

Under these circumstances, growth naturally came to be viewed as a vehicle for achieving economic and geopolitical security. Not only might growth raise Koreans out of the mire of poverty and destitution, but a stronger economy would give the country the capacity to deter aggression from abroad. Hence, a government that delivered growth could count on the support, or at least the acquiescence, of large segments of Korean society. This was an important source of political legitimacy in a country where normal transfers of power were rare.

In attempting to jump-start the process of growth, successive Korean governments, staring with the Park Chung-hee government that took power in 1961, capitalized on the 'advantages of economic backwardness' (in the famous phrase of Alexander Gerschenkron, 1962). Officials encouraged companies to acquire proven technologies from abroad, mainly by importing the capital goods that embodied foreign science and techniques.[3] They pushed saving and investment to high levels, encouraging the capital formation needed to accelerate the process of technology transfer. They kept wages and exchange rates low in order to encourage exports, thereby capitalizing on the country's geographical proximity to Japan and its political proximity to the United States.[4] They espoused the 'ideology of growth,' another of Gerschenkron's concepts, uniting society behind the push for industrialization.

In initiatives that turned out to have important implications for the long term, officials encouraged the development of institutional substitutes for the missing prerequisites for growth.[5] The main institutional substitutes were the *chaebols*, the banks, and the government itself. The *chaebols*, Korea's closely held and widely diversified industrial conglomerates, substituted for the weakness of markets and contracts, internalizing transactions that were difficult to carry out at arm's length. The banks substituted for underdeveloped financial markets, cultivating connections with the *chaebols* and helping them to secure the funding essential for their expansion and development. The government orchestrated the process, deploying selective subsidies and import drawbacks to promote exports and using financial regulation to channel Koreans' savings to the banks, establishing public financial institutions to make loans for large-scale industrial projects, and instructing private financial institutions to extend such loans on a preferential basis. It applied special depreciation schedules to imported capital goods and encouraged the organization of unions within a centralized system designed to facilitate government control, secure labor peace, maintain competitiveness, and ensure high investment.[6] It encouraged the creation of general trading firms along Japanese lines.[7]

This model served Korea well for many years. Growth averaged more than 7 percent per annum between the early 1960s and early 1990s. Real GDP per capita at international prices rose ten-fold, from less than $1000 at the end of the 1950s to more than $7000 at the beginning of the 1990s. The share of exports in output rose from less than 3 percent to nearly a third. Savings rates rose from the negligible levels characteristic of a subsistence economy to nearly 40 percent. In this light, it is not hard to understand why the prevailing policies commanded support.

Why this model worked is no mystery. It suited the circumstances of the time. Korea was still at the stage of extensive growth, when the main challenge was to import and deploy foreign technologies – to do known things in known ways. In these circumstances, there was little cost to centralizing decision making in the hands of a few industry leaders and government bureaucrats.[8] Centralization and bureaucratic direction may not have been conducive to innovation – to pioneering products and processes not yet developed and implemented abroad – but innovation was not the issue; emulation was. Similarly, in a period when Korea was concentrating on heavy industries characterized by strong economies of scale, the *chaebol* system, which encouraged large firms at the expense of small enterprises, had more benefits than costs. The concentration and scale of industrial enterprise may not have been conducive to flexibility, but flexibility was not at a premium.[9] A tightly regulated and controlled banking system that channeled funds to industry underwrote the capital formation that was the vehicle for technology transfer and the engine of extensive growth. The government's influence over bank lending may not have encouraged a culture of arm's-length transactions, but this mattered little so long as both international and domestic financial markets and transactions were tightly regulated and repressed, appropriately for a period when the main task of financial markets was to mobilize resources for capital formation, not to help choose among alternative investment projects or provide corporate governance services.

With time, Korea, like other 'latecomers' before it, began to show signs of graduating from the stage of extensive growth. Having exhausted the opportunities for growth through catch-up, it sought to move up the ladder into the production of more technologically sophisticated goods. Innovation and flexibility began to figure more importantly in the growth equation. Meanwhile, workers, having shown restraint for years, grew impatient with the government's low wage strategy. There was an explosion of union militancy coincident with political liberalization in the second half of the 1980s; it became apparent that the low wage strategy would have to be abandoned and that production would have to be reoriented away from exports in favor of domestic demand.[10] With indications that savings would not remain high forever, as households sought to satisfy pent-up consumption demands, banks began to look abroad for funding, encouraging the government to contemplate the selective liberalization of international financial transactions.

By the early 1990s it was clear that a fundamental reorientation of the Korean economy was underway, away from heavy industry and toward high technology, away from brute force investment and toward innovation, away from exports and toward domestic demand, away from strict government direction of transactions and toward market liberalization. Yet resistance to this reorientation was strong. *Chaebol* owners were reluctant to give up concessionary finance. Banks were reluctant to give up their close ties to the planning bureaucracy. Bureaucrats and ministers were reluctant to relinquish the levers of control from which flowed their power and prestige.

Economic and social institutions are networks of interlocking relations. It is hard to change any one component so long as the others remain in place. Thus, it was hard to limit government influence over the banks so long as the *chaebols*, not to mention government officials themselves, strongly preferred the status quo. It was hard to counteract the dominance of the *chaebols* so long as the banks, having long-standing relationships with their largest customers, preferred the prevailing state of affairs. Given what President Kim himself referred to as 'the collusive intimacy between business and government,' it was all but inevitable that the evolution of the country's institutions would lag the evolution of economic conditions.[11]

At the deepest level, it was this tension between institutional inheritance and current economic circumstance that was at the root of the crisis. Having exhausted the scope for growth through catch-up, Korea needed to move toward a more flexible, innovation-friendly economic model. Yet its *chaebol*-, bank- and government-centered arrangements remained in locked in place, placing the prospects for continued growth at risk. It was this tension that set the stage for the crisis that erupted at the end of 1997.

## THE CRISIS

But why in 1997, and not earlier, or, for that matter, later? And why in the context of the Asian crisis?

Indeed, some observers would insist that there were no flaws in the Korean model as it existed in the early 1990s – that the only mistake was to abandon some of the tenets of that model, notably the tight regulation of financial markets. The crisis, in this view, was simply an investor panic made possible by the decision to open Korean financial markets to international transactions. These initiatives allowed foreign money to first flow in and then be jerked back out when investors, perturbed by events in neighboring Thailand and Indonesia, lost their composure. The speed with which Korea recovered from the crisis once financial stability was restored is cited, in some circles, as confirmation of the validity of this interpretation.

An element of panic there undoubtedly was, but it is not the entire story. A more complete rendition would focus also on the mismatch between domestic financial development and international financial liberalization and on its role in the timing and shape of events. It was hardly coincidental that Korea began liberalizing the capital account hesitantly and unevenly in the early 1990s. With the model of extensive growth losing steam, it was necessary to devote progressively more resources to capital formation to keep the momentum going, and to achieve this by encouraging the banks to finance the *chaebols*' expansion into ever additional lines of business. Partially opening the capital account, starting with authorization to borrow abroad to finance capital goods imports in 1993, gave the financial sector additional resources with which to fund the activities of Korea's large corporations, putting off the day of reckoning.[12]

This pattern was not unique to Korea; it was a more general Asian response to the declining marginal productivity of capital and the increasing feebleness of the model of extensive growth. But the effects were accentuated by the extreme version of the model pursued in Korea, which placed an extraordinary premium on capital formation. According to the estimates of Hong (1981) and D. Cho and Koh (1996), the marginal productivity of capital declined from 35 percent in the 1960s to 25 percent in the early 1970s and less than 10 percent on the eve of the crisis.[13]

Because the elasticity of output with respect to capital is only on the order of a third to a quarter, this decline did not show up in the short run in an alarming decline in the rate of growth. Moreover, the decline in the marginal productivity of capital led officials to respond with policies designed to throw more investment at the growth problem. These still higher investment rates explain how a declining marginal productivity of capital, weak profitability and mounting financial problems could coexist with a seemingly impressive growth rate, observations which some economists have found difficult to reconcile and which have led them to some rather convoluted explanations for the Korean crisis.

Between 1994 and 1996, investment as a share of GDP rose by a further two percentage points, this despite the fact that domestic savings declined. The additional finance had to come from somewhere; hence, the authorities gave the banks access to offshore funding. Thus, the additional investment was financed by foreign borrowing. This was reflected in the current account deficit, which widened from 2 to 5 percent of national income, a level not reached since the crisis of 1980.[14] The current account deficit was financed by borrowing by the domestic financial sector, borrowing which rose by more than five percentage points of GDP over the same period. The banks were able to access such large amounts of external funding, if at short tenors, because their creditworthiness was seemingly secured by government guarantees.

So long as foreign capital flowed in, the economy's high rates of investment-led growth could be sustained. It could be denied that there were problems below the surface. But further increasing the capital intensity of an economy where the rate of return on capital had already fallen below international standards only compounded the fundamental problem.[15] Much of the additional investment flowed into sectors such as semiconductors where there already was excess capacity and productivity was low. Local observers were not oblivious to the problem; the stock market had been trending downward since 1996. This reflected disappointing rates of return on equity; for the 30 largest *chaebols*, rates of return had fallen from more than 10 percent in the mid-1980s to less than 6 percent in the early 1990s, and to less than 3 percent in 1996.[16] For the time being, foreign lenders had other things on their minds. But if they suddenly focused on the problem and capital flows turned around, as happened when the crisis erupted in Thailand and spilled over unexpectedly to Indonesia, the entire house of cards could come crashing down.[17]

There was pressure for international financial liberalization, to be sure, from the US Treasury and International Monetary Fund (IMF). Capital account convertibility was an obligation of South Korea as a newly minted member of the OECD.[18] But liberalization could have been phased in more gradually and sequenced more carefully. External pressures and constraints did not force the Korean authorities to free the banks' access to offshore funding while continuing to strictly control foreign access to Korean stock and bond markets and to limit inward FDI.[19] They did not dictate continuing to restrict Korean corporations' issuance of long-term debt and equity while at the same time allowing them to borrow abroad via the banks, thereby heightening their dependence on volatile foreign currency funding. In fact, discouraging the development of long-term debt and equity markets was important for maintaining the dependence of corporations on bank finance, where the banks were the lever with which government influenced the allocation of resources. In other words, it was the internal logic of the Korean model, and its growing strains as the scope for extensive growth was exhausted, that encouraged the authorities to liberalize the international accounts as they did. In turn, those actions largely explain the timing of the crisis – how it was put off for so long, and why it erupted when it did.[20]

The same mismatch between domestic financial development and international financial liberalization also explains why the fallout was so severe. With the banking sector heavily concentrated and sheltered from foreign competition, market discipline was limited. The banks, while privatized, had not yet shed the legacy of years of government involvement. They still took direction from the authorities on what products to sell and what priorities to set. Bank staff enjoyed guarantees of lifetime employment, mirroring the guarantee against failure that the banks themselves presumptively enjoyed as the quid pro quo for accepting the authorities' administrative guidance.

Believing that failure was not in the cards, the banks assumed heavy risks. They aggressively sought offshore funding, relying on short-term loans denominated in foreign currency. They did not keep on hand the dollar liquidity needed to repay their foreign-currency-denominated liabilities. They made illiquid loans to industry and held concentrated portfolios dominated by claims on a few *chaebols* without holding additional reserves against nondiversified risk.[21] They favored the politically connected – and the *chaebols* in particular – with preferential credit access. They did not do rigorous credit analysis or undertake careful loan reviews, relying instead on loans secured by physical assets, cross guarantees, and the word of corporate chairmen and directors.

The regulators did little to discourage this behavior. They did not demand rigorous credit analysis, loan classification, or provisioning. They did not require the banks to adopt international accounting and disclosure standards. They ignored evidence of excessive portfolio concentrations and risk taking.[22] They did not publish realistic, up-to-date figures on the extent of nonperforming loans. The government, for its part, limited the flexibility of the won, encouraging the perception that the exchange risk associated with dollar lending was minimal and inducing foreign banks to extend dollar credits to their Korean counterparts. There was the perception that the authorities were prepared to support them in the event of difficulties; this was the now-notorious problem of implicit guarantees.[23]

But it was not as if bank owners and regulators knew less than their counterparts in other countries about how to manage risks and supervise financial institutions.[24] Korean regulators were familiar with the Capital Adequacy Standards of the Basel Committee of Banking Supervisors and the CAMEL (Capital adequacy, Asset quality, Management, Earning and Liquidity) system devised by US regulators. The problem was not ignorance but the fact that relying on the banks to channel finance from households and, increasingly, foreign banks to Korean industry was seen as an integral and indispensable to the Korean growth model.[25] Even after the commercial banks were privatized in the mid-1990s, policy loans still accounted for nearly 20 percent of commercial bank lending, with window guidance presumably dictating the allocation of much of the rest.[26] The care and feeding of the *chaebols* required the continued support of the financial system. To suppress this one component of the mechanism without dismantling the rest would put the entire process at risk.

Banks are fragile, given that they operate in the information-impacted part of the economy and have maturity mismatches on their balance sheets. Because banks, securities markets and corporations are tightly linked, a banking crisis can disrupt the operation of the financial system and the entire economy. Problems in individual banks create problems for other banks, precipitating runs and cascading defaults and making the tangle of banking sector difficulties, once allowed to arise, immensely difficult to unravel.[27]

Thus, once the crisis erupted in Thailand and Indonesia, creating doubts about Korea's financial situation, foreign financial institutions refused to roll over their claims. The share of foreign loans rolled over fell from roughly 80 percent in October to 50 percent in November and 30 percent in December 1997.[28] The Bank of Korea pumped dollar liquidity into the system but found its reserves, even with replenishment by the IMF, inadequate to meet the needs of the banks. Interbank rates soared, and by late December the authorities found themselves having to choose between widespread failures of banks unable to meet their foreign obligations, uncontrolled depreciation of the won, and default by a government that assumed responsibility for the banks' liabilities.

Is the suggestion, then, that had Korea not liberalized its capital account while maintaining a heavy state presence in all financial transactions, the economy would have prospered? There is every indication that the maintenance of tight restrictions on capital account transactions, *à la* China or even Malaysia, would have insulated the economy from the financial crisis in the winter of 1997–98. After all, both of these countries avoided the worst financial aspects of the crisis. In particular, had there been no relaxation of the capital account restrictions that traditionally prevented Korean banks from borrowing offshore, there would have been no 90-day bank loans to roll over.

But keeping the capital account closed while maintaining a heavy state presence, not merely in the financial sector but the economy as a whole, would not have solved the country's deeper problems. Absent structural changes to encourage innovation and enhance flexibility, the marginal product of capital would have continued to fall. Growth rates would have continued to slow. Sooner or later, the poor profitability of industrial lending would have created mounting problems in bank balance sheets. Just as the banks were compelled by the government in the spring of 1997 not to force the liquidation of two troubled *chaebols* (Sammi and Jinro), they would have been forced to exercise yet additional forbearance as one *chaebol* after another experienced financial difficulties. Bank portfolios would have weakened further; bank earnings would have continued to decline. To put it another way, because the banks were the instruments of the government's industrial policy, an industrial policy encountering diminishing returns would have eventually created serious financial problems.[29]

The cost of recapitalizing the banks would then have punched a hole in the fiscal accounts, hobbling the public sector. Perhaps most importantly, there would have been nothing to ensure that the same problem would not recur. The Korean economy would still have had to be restructured sooner or later.

Would the situation have become untenable earlier or later in the absence of capital account liberalization? Initially, selective capital account opening allowed the *chaebols* to sustain higher rates of investment than would have been possible otherwise, in turn allowing the economy to run higher rates of growth. If the capital account had remained closed, this would have been harder. Growth would have been correspondingly slower. Perhaps a crisis – albeit a crisis of a different sort – would have erupted earlier. On the other hand, had the capital account remained closed, Korea would have been better protected from the Asian flu. Had the country been able to stagger on into 1997, with lower investment rates and slower growth but no other changes in its economic structure, it might have been able to stagger on for several additional years, given its insulation from financial turbulence elsewhere in Asia. In this scenario, the crisis would have occurred later. Later or earlier? No doubt debates over the appropriate counterfactual will occupy economists and economic historians for many years.

## THE RESPONSE

The controversy over the response to the crisis centers on the stabilization program adopted under IMF auspices. It has been argued that the sharp interest rate hikes insisted on by the Fund with the goal of stemming reserve losses and restoring confidence among international investors were strongly destabilizing. Korea was special, the argument runs, because the country's corporations were so highly leveraged.[30] Interest payments as a share of business costs were three times as high as in the United States, and operating income before taxes was a scant 35 percent greater than debt service obligations. Since more than two-thirds of corporate debt was short term, higher interest rates pushed this last ratio down; they rendered many heavily indebted firms technically insolvent, dimming the short-term prospects for the economy and perversely encouraging foreign investors to get out. The fiscal cuts programmed by the Fund, it is further argued, depressed demand and therefore corporate profitability. They were superfluous, or so it is suggested, in a country that entered its crisis with a balanced budget and in which inflationary pressures were subdued. Moreover, the Fund waited too long to orchestrate negotiations with the foreign banks, rather than hoping that having large amounts of official money on offer would induce the banks individually to extend their loans.

In assessing the IMF program and the government's stance, it is again important to recall the context. The Korean crisis was unexpected; no one anticipated that the financial whirlwind would spread from Thailand and Indonesia. And when the storm blew up, it did so with exceptional speed, leaving scant time to craft the details of a stabilization program. An election was coming (on 18 December), and there was no clear front-runner. All that was certain was that there would be an extended interregnum between the election and installation of the new president. All three candidates had repeatedly declared that under no circumstances would they approach the IMF. This meant that the authorities were ill prepared to negotiate the details of a Fund program.

In the event, the program negotiated over the last week of November provided unprecedented amounts of financial support.[31] After initially expressing skepticism about its provisions, all three presidential candidates agreed to adhere to the IMF's recommendations. In its Letter of Intent to the Fund, the government agreed to raise interest rates and to maintain them at as high a level as needed to stabilize markets. The overnight call rate was immediately increased to 25 percent and raised again to 30 percent on 24 December after the initial increase failed to stem the tide. Corporate bond rates quickly rose to a matching 30 percent. The Fund calculated that slower growth would increase the budget deficit by 0.8 percent of GDP and that service on the additional government debt that would have to be issued to pay for recapitalization of the banking system would cost about the same again; it therefore programmed a 1.5 percent of GDP fiscal tightening for 1998, to be distributed evenly between tax increases and expenditure cuts.

This fiscal arithmetic was the instinctual reaction of Fund staff functioning under intense pressure of time. Given a few months to reflect, the Fund acknowledged that fiscal contraction in these circumstances was overkill. The Korean government had little debt (contingent liabilities notwithstanding), and its financial accounts were already in surplus when the balance in the social security funds was taken into account. In its 7 February 1998 revision of the Letter of Intent the IMF therefore agreed to additional social spending and a budget deficit of approximately 1 percent of GDP. In the second half of the year, with the economy clearly beginning to recover, the IMF relaxed its monetary and fiscal conditions further, and the government passed a supplementary budget.[32]

Whether a less stringent monetary policy would have been more effective remains controversial. Lower interest rates would have meant less pain for

Korea's highly leveraged *chaebols*; fewer corporations would have been thrust into bankruptcy, other things equal. But other things almost certainly would not have been equal; lower interest rates would have also meant a weaker exchange rate, since lower short-term returns would have given investors less compensation for staying in the country.[33] In particular, had the Korean government insisted on significantly lower interest rates, it would have found it more difficult to reach an agreement with foreign banks to roll over their maturing loans.[34] Some *chaebols* might have been spared, but the government would have been forced to default on the bank debts for which it had assumed responsibility. And default was something that the government, concerned to preserve its international good standing, was most anxious to avoid. The critics can argue that its objectives should have been different, but the high interest rate policy was consistent with the Korean government's own priorities.

Before long, interest rates began coming down, not as soon as the IMF had anticipated, perhaps, but in any case by the middle of 1998. By June they were again below pre-crisis levels. Industrial production fell by 15 percent over the first half of 1998 (on a seasonally adjusted basis) but was again running at pre-crisis rates by the end of the year. (By the end of 1999 it had reached 140 percent of those levels.) The exchange rate, having plummeted from 800 to 1800 to the dollar, recovered to 1100. All this provides some *ex post* justification for the monetary policy actions actually taken.

More controversial still were the long lists of microeconomic and structural conditions attached to the successive Letters of Intent. These specified, among other things, that the central bank would be made independent, that the country would adopt international accounting standards, that the *chaebols* would drop their traditional system of cross-subsidies and loan guarantees, and that domestic capital and motor vehicle markets would be opened up to foreign competition. These conditions have been criticized for emphasizing Korea's structural problems at a time when the priority should have been to restore confidence by talking up the economy's strengths. They have been criticized for doing more to delay than encourage structural reform by 'weakening ownership' – that is, for fostering the impression that these structural changes were being forced on the country from outside and thereby fueling popular resistance to change. They have been criticized for pandering to foreign interests, notably the interest of the US government in opening the Korean economy to foreign banks and producers. And they have been criticized for foisting on Korea one-size-fits-all advice – that is, for overlooking the fundamental strengths of the Korean model while attempting to remake the economy along Anglo-Saxon lines.

It is not hard to raise questions about particular conditions attached to the Letter of Intent. That the economy bounced back quickly from the crisis is no proof of the efficacy of the IMF's conditions; this could have instead reflected Korean society's heightened sense of solidarity in times of crisis, or the intrinsic strengths of the Korean economy. But to focus on the IMF's recommendations rather than the policies of the Korean government itself is, in any case, to lose sight of the point. It is not as if the government strongly opposed the IMF's recommendations. To the contrary, many government officials had already grown convinced of the need for far-reaching changes to prepare the country for the twenty-first century. It was Korean officials themselves who insisted on adding to the Letter of Intent conditions related to labor market reform, such as changes in regulation to permit layoffs and facilitate restructuring (Cumings, 1999). The newly elected president, Kim Dae Jung, was a long-standing critic of his country's *chaebol*- and bank-centered economic system, which he now sought to restructure root and branch.[35] The crisis was not welcome but, coinciding with Kim's electoral victory, it provided a window for implementing far-reaching structural and microeconomic reforms. It shattered the cozy system of mutual support that had held the Korean model in place, allowing the government to systematically address major problems in the banking and corporate sectors.

## REFORM AND RECOVERY

Thus the lesson that the government drew from the crisis was the need to encourage flexibility, transparency and market discipline. The events of 1998 offered an extraordinary opportunity to advance that agenda. But doing so required surmounting the obstacles posed by the country's immediate financial difficulties. Perhaps 40 percent of Korean firms, including a number of the largest *chaebols*, had been rendered insolvent. Loan losses had destroyed the operating capital of many banks.[36] The question was whether the steps needed in the short run to get banks and firms back on their feet would be compatible with the fundamental reorganization of the Korean economy.

It proved easiest to push through changes in the structure of the financial sector, in part because the banks had long been under implicit or explicit government control. Central bank independence was buttressed. Statutes and regulations governing foreign bank ownership were liberalized. Prudential rules governing loan classification, provisioning, connected lending, short-term foreign borrowing and foreign currency exposures were tightened, and responsibility for supervision and regulation was consolidated in a single independent agency. Insolvent banks and nonbank financial institutions were nationalized, merged, or closed. And, to limit the economy's dependence on the banks, the authorities pursued initiatives to promote the development of domestic securities markets, introducing competitive bidding on initial offerings in the government bond market and promoting a futures market in bonds.

Most visibly, two of the largest commercial banks, Korea First Bank and Seoul Bank, were taken over by the government in December 1997, and six months later five smaller banks were closed. Within two years, the number of commercial banks had fallen by a third. Ten merchant banks were shut down in January 1998. Banks with liquidity problems were required to submit rehabilitation plans before being recapitalized; by the end of 2001 the government had injected 155 trillion won into distressed financial institutions (the equivalent of roughly 25 percent of GNP), mainly as a result of purchases of impaired assets. Nonperforming loans on the books fell to less than 4 percent of outstanding loans in 2001, down from 14 percent in 1998. In 2001 Korean banks returned to profitability for the first time in four years.[37]

Corporate reform was harder. Whereas banks were in the business of lending, the *chaebols* were involved in a myriad of activities. The authorities sought to address the complications by encouraging a series of 'Big Deals,' in which the *chaebols* swapped subsidiaries with the goal of eliminating excessive diversification and concentrating on their core competencies.[38] However, this addressed the symptom – inefficient scale and scope – rather than the fundamental problem – weak corporate governance that allowed managers to pursue size at the expense of shareholder value. The government sought to limit size by limiting indebtedness – specifically, by capping permissible debt/equity ratios – but limits on borrowing meant limits on investment, which threatened the recovery of industrial production. The *chaebols* being larger employers than the banks, initiatives to encourage restructuring that also slowed their recovery were resisted for their undesirable employment consequences.

And, more than the banks, the *chaebols* were still countervailing centers of political power. In many cases, they emerged from the crisis still under the control of their founding families.[39] The political influence of entrenched ownership made it difficult for the government to close down insolvent firms, replace management and strengthen the rights of outside shareholders. Not that the authorities didn't try, but progress occurred in fits and starts. The path of least resistance was first to restructure the financial sector, where government rather than family control prevailed, and then to use the reformed financial system to further the authorities' efforts to restructure the corporate sector.

This was why the authorities sought to rein in the *chaebols* by limiting their leverage. They adopted a target for debt/equity ratios of 200 percent, to be achieved by the end of 1999, and instructed the banks to adapt their lending practices accordingly. The dilemma, as noted, was that limiting borrowing meant limiting investment and thus slowing the recovery of employment. Since many Korean corporations already had high debt/equity ratios, a uniform ceiling imputed the same shadow price of finance to all producers, something that was not easily reconciled with market principles.

Ultimately, the market mechanism will determine the availability of credit to Korean firms only if the banks rely on their own calculations of profitability, not on government guidelines. The regulators therefore pressed the banks to undertake credit reviews and to limit the provision of additional external funding to firms with dubious repayment prospects – that is, to lend on economic criteria. But the banks, while under pressure from supervisors, felt pressure from corporates as well, particularly from distressed *chaebols* using debt to gamble for redemption.[40] Large borrowers were also able to substitute nonbank for bank credit, shifting their demands to investment trust companies over which they themselves had control.[41] Daewoo is a case in point: the company was able to significantly increase its borrowing in 1998 despite its dubious financial condition. Reflecting these pressures, bank reviews of 298 companies completed in 2000 identified just 50 companies whose credit should not be rolled over and which would therefore have to be sold, merged or liquidated.[42] Subsequent reviews of an additional 1100 or so companies, conducted under the auspices of the Financial Supervisory Service, added to this list fewer than 300 more firms. As of mid-2001, more than 20 percent of all bank loans were still to companies with negative earnings.[43] Concern that large companies were continuing to absorb a disproportionate share of bank credit then led the government to pressure the banks to roll over their loans to small and medium-sized firms and to establish a corporate restructuring fund and a public venture capital fund to extend concessionary finance to small enterprises.

Outside directors and shareholders are the other stakeholders with an interest in restructuring. In 1998, the Korean stock exchange required all publicly traded companies to have at least one outside director and by the end of 1999 to draw a quarter of its directors from outside.[44] The government strengthened the rights of minority shareholders, making it easier for them to inspect the company's books, file lawsuits, and table proposals at general shareholders' meetings.[45] It lifted limits on the voting rights of institutional investors with the goal of increasing the likelihood that management that failed to maximize shareholder value would be replaced.[46]

Accounting and reporting reforms have meanwhile made it easier for outside investors to determine what goes on inside the Korean corporation. Firms were required to adopt international accounting principles and standards in October 1998 and, starting in 1999, to produce consolidated financial statements that net out intra-group transactions and are audited by independent accountants. Transparency has been further enhanced by measures limiting cross-shareholdings to 25 percent of equity. While implementation of these measures remains uneven, the same can be said of other countries (including the United States, given what we have learned from Enron).

How should we evaluate the progress?[47] Corporate debt/equity ratios have fallen from 3.96 before the crisis to 2.11 at the end of 2000. Hyundai's break-up into several groups is proceeding.[48] Kia was sold to Hyundai. Samsung Motors was sold to Renault, a step that would have been almost inconceivable before the crisis. Following repeated delays, several Daewoo affiliates were finally split off or placed in receivership. The top *chaebols* have significantly reduced the number of their subsidiaries. Foreigners have raised their stake in companies listed on the Korean stock exchange from 13 percent in 1996 to 30 percent in 2001.

But not a few *chaebols* remain financially weak. As of the end of 2001, nearly a third of the top 30 conglomerates were in some form of workout.[49] A number of the top 30 continue to report negative returns on equity. More broadly, interest coverage (the ratio of operating profit to interest expense) has risen from barely unity in 1998 and 1999 to 1.6 in 2000 and 1.7 in 2001.[50] But as many as a third of manufacturing firms are still unable to meet their interest obligations, much less to repay principal, and remain dependent on the willingness of the banks to roll over their loans.[51]

That large parts of the Korean corporate sector have not yet returned to profitability reflects the severity of earlier difficulties, both the depth of the recession and the overhang of nonviable debt, which remains difficult to clear away. Post-1997 reforms placed tighter deadlines on court-supervised reorganizations and established a specialized bankruptcy court in Seoul. But the system remains overloaded, and companies still have as long as 18 months to submit and accept reorganization plans. The courts have limited ability to impose such plans on creditors seeking to block reorganization agreements or pressing for liquidation in their quest for a larger share of the enterprise's assets.[52] Cross-shareholdings continue to limit the scope for hostile takeovers. Even after seizing control, bank creditors remain reluctant to systematically restructure problem companies for fear of realizing additional losses.

Completing the picture requires observing that the uneven progress of reform has not obviously impeded the recovery of the economy. Growth rates have decelerated from the turbocharged 10 percent rate achieved in 1999–2000, when Korea bounced back from the crisis, but remain impressive even in the face of a global slowdown. Two indications are the fact that Korea had the best performing stock market in the industrial world in 2001 and that the government completed repayment of its IMF loan in August 2001, three years ahead of schedule. The country received an extraordinary double upgrade from the rating agencies in 2001 and graduated from the Emerging Market Bond Index (EMBI) in 2002.

The pace and character of structural reform are the key issues going forward. Korea is attempting to move to a more decentralized, atomistic corporate sector, a more competitive, market-based financial sector, a more flexible labor market, and a less interventionist public sector. It is too early to tell whether this is the right model for the post-crisis economy. And the question remains of whether, given Korea's historical experience and its deep-seated political and economic legacy, the goal is in fact achievable, or whether the country will eventually have to grope toward another, different development model. It seems safe to say that we have not yet seen the shape of the Korean economy in the twenty-first century.

## A SYNOPSIS OF WHAT FOLLOWS

These are the questions taken up by the contributors to this volume. In Chapter 2, Un-Chan Chung provides an overview of the Korean economy before and after the crisis. Chung focuses on what is in a sense the key analytical issue, namely, how structural weakness could have coexisted with an extraordinary record of macroeconomic success. His answer emphasizes weak corporate governance and implicit government support that allowed the *chaebols* to maximize growth rather than profitability and shareholder value, and the deficient loan screening and allocation practices of financial institutions, which sustained growth in the face of mounting economic and financial strains. Chapter 3 by Won-Am Park and Gongpil Choi analyzes the consequences using the now conventional 'second generation' model of financial crises. The authors show that attempts to interpret the crisis purely in terms of flawed fundamentals or investor panic are too simple; rather, one needs a model with roles for both. Specifically, deteriorating fundamentals (in particular, slowing growth and mounting financial fragility, which were inevitable corollaries of the Korean model) moved the economy into a zone of vulnerability where a loss of investor confidence, brought about by events in Thailand and Indonesia, could lead to a debt run and to the rapid depletion of international reserves, precipitating a crisis that the authorities lacked the capacity to withstand.

The chapters that follow assess the macro policy reaction. Chapter 4 by Young-Kwan Yoon focuses on the US policy response. International assistance for Korea came mainly from the IMF but at the insistence of the US government, which is the Fund's largest shareholder. The US first torpedoed the Japanese proposal for an Asian Monetary Fund and the idea of unconditional bilateral support. It then pressed the IMF to come to Korea's aid when its crisis threatened the global financial system. And it took the lead in organizing negotiations with US, Japanese and European banks in the critical last week of December 1997. Yoon argues, contrary to conventional wisdom, that security considerations did not decisively influence the US decision. It was the perceived threat to the international financial system and fears of how an even deeper crisis would affect the US economy that drove the decision to extend extraordinary assistance. Treasury officials were also convinced of the necessity of remaking the Korean economy along Anglo-Saxon lines in order to lay the basis for renewed stability and growth, a fact which helps to explain the conditions attached to IMF programs. That conviction was more than incidentally reinforced, Yoon shows, by the knowledge that market liberalization and opening would benefit US banks and corporations seeking improved access to Korean markets.

Chapter 5, by Dongchul Cho, turns to monetary policy. The author starts with the controversy over high interest rates; like most previous studies his survey finds no evidence that the policy was ineffective or counterproductive. He does, however, suggest that the government stuck with high interest rates for too long: rates could have been lowered several months earlier, encouraging faster recovery, given the absence of inflationary pressures and the evident return of confidence. The most striking aspect of subsequent experience is how sharply rates fell and how stable they then remained. In part this is explicable in terms of the country's adoption of inflation targeting as its monetary policy framework: inflation targeting provided a nominal anchor for policy, creating the certainty and stability valued by market participants. That said, Cho suggests that the new monetary regime is not the entire story, that in addition other financial market reforms provide part of the explanation for the positive evolution of interest rates.

While early assessments of fiscal policy were sharply critical, Joosung Jun's analysis in Chapter 6, informed by more time and evidence, reaches a more favorable conclusion. The 1998 deficit of 4.2 percent of GDP, while a departure from the country's fiscal tradition of balanced budgets, appropriately sustained demand in the midst of a severe recession. When the economy then recovered, the authorities judiciously allowed the budget to return to surplus. The maintenance of a balanced budget and even surpluses on financial account going forward are critical, the author argues, given the government's contingent liabilities, pressures for increased social spending, and the aging of the population.

Chapter 7, by Joung-Woo Lee, then analyzes the social impact of the crisis. Inequality was not a major social issue before 1998, the land reforms of the 1950s and subsequent government policies having produced a strikingly even distribution of income. But this very fact heightened tension over the widening disparities that resulted from the crisis. Unskilled workers were the most likely to become unemployed once restrictions on layoffs were relaxed.[53] Members of the lower deciles of the wealth distribution saw their situation deteriorate as a result of rapidly growing debts, while the members of higher deciles did not; sometimes the latter were even able to improve their position by accumulating real estate in the period of severe financial distress. The net result was a reduction in the size of the middle class, aggravating social and political polarization. Those worries are reinforced by the observation that changes in technology had already raised the skill premium and by the prospect that further economic and financial liberalization will reinforce the trend toward greater inequality, as it evidently has in the United States.

The next two chapters, by Joon-Ho Hahm and Sung Wook Joh, review the results of financial and corporate restructuring. Hahm first describes how the pre-crisis pattern of credit allocation contributed to the investment spree of 1994–96 and heightened financial vulnerabilities. After summarizing post-crisis financial reforms, he shows how these policies affected the flow of funds in the restructuring period. While concluding that there has been progress in creating a more market-based financial system, Hahm predicts that further banking sector consolidation will be needed to cement these gains, as additional high-quality borrowers turn to the securities market, accelerating the process of disintermediation. It will be important for the regulatory authorities to reinforce market discipline and maintain the pressure for consolidation; otherwise, the banks, which still receive captive deposits, will respond to the loss of high-quality borrowers by pouring liquidity into high-risk property markets, as occurred in Japan in the late 1980s. Clearly, this is a precedent to be avoided.

Joh's chapter describes the environment that led to corporate sector problems such as high debt/equity ratios and low profitability. She examines the role of poor corporate governance and evaluates recent reforms in this light. Stock market data suggest that the influence of controlling shareholders has diminished, indicating some strengthening of minority shareholders' rights. In addition, limits on cross-shareholding and cross-debt guarantees show signs of having strengthened shareholder discipline, in that the daily returns on subsidiaries' stock prices vary more independently than before. The exception is the five largest *chaebols*, where implicit guarantees for subsidiaries have not been eliminated, or so the co-movement of stock prices suggests. The implication is that corporate sector reforms have yet fully to resolve the problems posed by the largest conglomerates.

Chapter 10, by Young-Ki Choi and Dae Il Kim, considers developments in labor markets in more detail. Unemployment insurance coverage has been broadened. The national pension system has been expanded. Temporary work has been allowed to increase. The government created a Tripartite Commission of representatives of employers, workers and government, charged with reaching a consensus on labor relations and ensuring that the burdens of restructuring were equitably shared. This Commission crafted a Social Agreement that permitted mass dismissals, something that was not happily received by the rank and file of the Korean Confederation of Trade Unions (KCTU). The leadership of the KCTU was criticized and replaced, and the new leadership withdrew from the Tripartite Commission in 1999. Labor market reforms remain contested, with uncertain implications for industrial relations. Rates of unionization have declined from formerly high levels, and industrial unions have gained ground at the expense of enterprise unions. The worry is that Korea enjoys neither the relatively centralized labor–management relations of some European countries nor the competitive labor markets of the United States. Occupying the middle of this distribution, the work of Calmfors and Driffill suggests, heightens the risk of labor–management strife and inadequate flexibility.[54]

In Chapter 11, Jaeyeol Yee looks more closely at how far Korea has gone in replacing family and political ties with market-based transactions. Much has been done to root out corruption, enhance the reliability of contract enforcement, increase transparency, and strengthen the play of market forces generally. The country adopted a new Anti-Corruption Law in July 2001 and created the Korea Independent Commission Against Corruption to fight the problem. It adopted a battery of disclosure, accounting and auditing requirements for banks and firms, as described above. Yet the government remains intimately involved in various structural and microeconomic aspects of the economy. Korea still ranks below other East Asian countries according to the PricewaterhouseCoopers index of opacity. Transparency International ranks it below other East Asian countries on its survey measure of corruption. While progress made in the last five years should not be underestimated, clearly much remains to be done.

The last of this series of chapters, by Hyun-Chin Lim and Joon Han, considers the impact of the crisis on social and political relations. As they describe, the attempt to remake the economy along more flexible, transparent and market-based lines has transformed state–societal relations. While the government continues to play a prominent role in, *inter alia*, shaping the restructuring process and developing a modern social safety net, its ability to guide political and social outcomes was much impaired by the crisis. Lim and Han worry that Korea has not yet figured out how to meet the diverse demands of society and to resolve the contradictions of its own policies. Specifically, it has not figured out how to build the more flexible, market-based economy that will be required for the maintenance of international competitiveness while at the same time preserving the equality, equity and social solidarity demanded by Korean society.

The last two chapters contemplate future prospects. Kiseok Hong, Jong-Wha Lee and Changyong Rhee use cross-country evidence to evaluate the risk of further crises. International experience suggests that this risk is minimized when a country strengthens its current account and fiscal balance, when its policies encourage the resumption of inward foreign direct investment, and when it successfully reduces its dependence on corporate indebtedness, short-term indebtedness in particular. The outlook for financial stability in Korea is favorable on this score: the country's current account and fiscal balances have strengthened impressively, inward FDI is on the rise, and debt ratios have been reduced, as noted above. To be sure, questions can be raised about the adequacy and consistency of measures to improve the climate for FDI and about whether indebtedness will be successfully maintained at its new lower level. Korea will not run current account surpluses forever; in particular, as the population ages, savings rates will come down, weakening the current account. Thus the authors' analysis points to the macroeconomic and financial aggregates that should be monitored by the markets and by vigilant government officials.

In the final chapter, In June Kim, Baekin Cha and Chi-Young Song take a broader look at the unfinished agenda. They warn that the risk of financial instability cannot be dismissed. There are still important unfinished tasks in the areas of financial and corporate sector reform, in particular. In a sense, it is economies in which the process of economic and financial reform and liberalization is underway but not yet complete where the risk of disruptions is greatest. And economies like Korea, which sought to restore investor confidence during the previous crisis by opening the capital account of the balance of payments still further, are especially susceptible to problems originating elsewhere in the region.[55] This is a reminder of the urgency for Korea of pushing ahead in order to exit the intermediate zone of incomplete reforms where such vulnerability is greatest.

## NOTES

1. According to World Bank calculations, as published in the Bank's *World Development Indicators*.
2. The only faster growing Asian country is China. And China, clearly, is a special case. It is starting out far behind, and its catch-up growth is fueled by virtually unlimited supplies of low-cost labor.
3. Foreign capital goods suppliers sometimes provided training and scientific expertise to Korean purchasers, facilitating the associated technology transfer. In contrast, inward foreign direct investment (FDI) was discouraged by Korean policy, presumably on the grounds that it would undermine government control. In particular, this meant that foreign banks could not be allowed to enter the Korean economy, since this would undermine the effectiveness of directed lending. This perception had important implications subsequently, specifically in the mid-1990s when the capital account of the balance of payments was partially opened, allowing Korean banks to borrow offshore, but inward FDI (by bank and nonbank firms alike) continued to face formidable obstacles.
4. And using exports as a barometer of success in meeting the planners' economic goals. The currency was devalued by nearly 100 percent in 1964, and the country's multiple rates

were unified. Then, starting in 1965 the government raised interest rates on deposits to mobilize domestic savings and began extending tax incentives to export-related industries. These, then, were the key years of the transition to what is now known as export-led growth.

5. Institutional substitution was yet another of Gerschenkron's famous analytical constructs.
6. The laws centralizing union structure were adopted at the beginning of the 1970s and loosened very slightly in the 1980s.
7. Why exactly Korea embraced this particular approach to economic development, itself a rarified version of Japan's state, bank and *keiretsu*-led model, continues to be debated. Several explanations have been suggested. In the 1960s, Japan was still the only example in Asia of a successful development experience. General Park had extensive contact with Japanese educational and military institutions (Noland, 2000). More than three decades of Japanese rule of the Korean Peninsula had left deep impressions, some positive as well as many negative, making Japan the obvious place to look when choosing a development model. The occupation also left an institutional legacy. It leveled the class system and bequeathed a financial system already structured along Japanese lines.
8. A neat theoretical model illuminating these points is Acemoglu et al. (2002).
9. Similarly, competition in domestic product markets may not have been intense, as the *chaebols* mastered the techniques of reciprocal dealing and market cornering, but this was of relatively little consequence in a period when the most technologically dynamic firms were producing for foreign, not domestic, markets.
10. To buy labor peace, the government imposed restrictions on layoffs and dismissals. By making industrial restructuring more difficult, this further locked in the prevailing structure of the economy.
11. Cited in Cumings (1999), p. 38.
12. In addition, there was pressure for capital account liberalization from small firms and other borrowers who felt disadvantaged by the favoritism the banks displayed toward the *chaebols*. But these lobbies did not obviously prefer the uneven order in which Korean capital account liberalization was phased in, with those very banks given exclusive access to foreign funding. Limited scope was also created in the first half of the 1990s for corporations to borrow offshore. In practice, most of their foreign borrowing was indirect, through the banks. This is not surprising; small firms in particular had little direct access to foreign finance.
13. Kwack (1999) instead computes total factor productivity (TFP) growth and finds that it began to slow from the 3 percent per annum characteristic of the 1970s and 1980s to less than 1 percent around 1990. There is no little controversy over estimates of TFP growth in Asia in the 1980s and 1990s, but, as Hsieh (2002) shows, the controversy does not extend to South Korea.
14. The Korean economy had grown overheated in the late 1970s as a result of the government's Heavy and Chemical Industries Drive. Attempts to stabilize were then made difficult by a drought which disrupted agriculture in 1978 and the second OPEC oil shock in 1979. Both stabilization, which eroded the competitiveness of Korean exports, and the oil shock contributed to the current account deficit, which rose to record levels in 1980 and growth turned negative for the first time in more than two decades. Eventually, a 20 percent devaluation of the won, supported by restrained monetary policies, restored export competitiveness, eliminated the current account deficit, and put the economy on the road to recovery.
15. Kwack (1994) and Pyo (1999) show that the rate of return on capital was below prevailing rates in the United States and even Japan. Krueger and Yoo (2002) show that rates of return in manufacturing were lower than in Taiwan (the other Asian 'tiger' with which Korea is frequently compared) throughout the 1980s and 1990s.
16. Krueger and Yoo (2002), Table 7. Returns for non-*chaebol* firms move in parallel, although the decline is less pronounced. There was a recovery in the rate of return in 1994–95, years when Korean growth accelerated, fueled by a sharp and ultimately unsustainable expansion of domestic credit (and by good times in the global electronics industry). Claessens et al. (1998) show that the rate of return on assets was lower in

Korea, on the eve of the crisis, than in the United States, Germany, and eight other Asian countries.

17. In retrospect, the only surprise is that earlier manifestations of the problem, such as the collapse of Hanbo Steel and Sammi Steel, two top-30 *chaebols*, in January and March of 1997, followed by the collapse of Jinro in April and the well-publicized problems of Kia Motors in the summer of the year, did not have this precipitating effect.
18. Prior to the crisis, the Korean authorities tabled a program of financial liberalization designed to bring the country into compliance with its OECD obligations, but few elements of this multi-year program were in place when the crisis struck. As Dobson and Jacquet (1998) and Noland (2000) note, countries are permitted reservations to the OECD code of financial liberalization, and the Korean government was not shy about taking advantage of this option.
19. Foreigners were prevented from purchasing the vast majority of corporate bond issues, for fear that this would undermine bank control. The share of stock issues that could be held by foreigners was initially limited to 10 percent in 1992 and then raised in a series of small steps, to the point where it had reached 18 percent in 1996. That foreign-eligible shares frequently traded at a premium is evidence of the binding nature of these restrictions.
20. The situation in certain other Asian countries, such as Thailand, bears no little resemblance, with the exception of the lesser importance there of family-owned and -controlled industrial conglomerates. But the Korean variant has some distinctive aspects, such as the uneven opening of the capital account which caused foreign finance to flow through the banking system, which was not so much the case in certain other Asian countries (Indonesia, for example). In this respect there were important parallels between the Korean and Thai cases, in both of which the capital account was opened unevenly and the banks were given favored access to international financial markets.
21. The problem of portfolio concentrations was especially evident in the large banks, which had the closest ties to the *chaebol*.
22. These problems were widespread in the commercial banking sector, but they were especially prevalent among the even more lightly regulated merchant banks, which expanded rapidly in the mid-1990s after the authorities attempted to clamp down on commercial bank lending to the *chaebols*. (Not a few of the merchant banks were in fact owned by the *chaebols* in question.)
23. Arguably, these guarantees extended to the banks' customers, namely, the *chaebols* – or so was the perception – since they too were the instrumentality of the government's industrial policy. This only aggravated the moral hazard problem (since it seemingly rendered the *chaebols* 'too big to fail') and helps to explain how they acquired the extraordinary levels of leverage that proved to be their albatross when the crisis struck.
24. One mistake the regulatory authorities did commit was to adopt in 1996 a mandatory deposit insurance scheme that made no provision for risk rating, which worked to further limit the market discipline felt by risk-seeking banks. In addition, it can be argued that it was a mistake to deregulate interest rates (a process that began in 1988). Given the otherwise distorted nature of the Korean banking system, the effect of interest rate deregulation was to allow the least solvent and most risk-tolerant banks to compete for deposits.
25. 'Policy lending' probably reached its peak in the 1970s, coincident with the Heavy and Chemical Industry Drive, when it is estimated to have accounted to as much as 60 percent of bank portfolios (S. Cho, 1994; J. Yoo, 1994; Noland, 2000). Not coincidentally, this was the period when the *chaebols* consolidated their hold on the economy (see Sakong, 1993), when the largest *chaebols* expanded at annual rates of 30 to 35 percent, and when the high debt/equity ratios that are among their distinguishing characteristics first began to emerge. The government subsequently sought to impose more discipline on *chaebol* borrowing by making a particular bank responsible for monitoring the borrower's business performance and overseeing its borrowing from all sources (in effect emulating the Japanese main bank system). In practice, the big conglomerates had as much leverage over the big banks as vice versa; *chaebol* borrowing was only weakly constrained. When in response the government placed a freeze on bank borrowing by the top *chaebols*, the latter shifted their borrowing to nonbank financial intermediaries.

26. Noland (2000), p. 53.
27. That the Korean banking system was characterized by an unusually high level of concentration (with six banks accounting for more than half of all domestic credit) heightened the danger that a few problem banks might bring down the entire financial pyramid. This too was no coincidence; regulatory barriers to entry, which supported high levels of concentration, were part and parcel of the government's policy of directed lending. That is, it was easier to give instructions to a few banks than to many, and if directed lending depressed profits, the resulting competitive pressure was less in an oligopolistic environment.
28. On some days in December the rollover rate fell to as low as 5 percent. Figures from Jwa and Huh (1998).
29. This is more than a counterfactual. In actual fact, rates of return on bank assets and equity almost halved in the period 1992–96, reflecting declining returns and mounting problems in the corporate sector.
30. Debt/equity ratios in manufacturing were in the range of 300–400 percent, in contrast to other industrial countries, where they were typically well below 200 percent (according to international comparisons by Krueger and Yoo, 2002). Thus, it is argued that the IMF's cookie-cutter advice failed to recognize this fundamental difference in the structure of the Korean economy.
31. Negotiations spanned the period 21 November–3 December. The government first attempted to obtain unconditional support from the US and Japanese governments, but the former in particular insisted that it go through the IMF and borrow subject to the usual conditions. The package included a \$21 billion standby credit from the IMF, \$10 billion from the World Bank, \$4 billion from the Asian Development Bank, and an additional \$22 billion from the United States, Japan and other countries. The size of the package reflected sudden awareness of the size of the short-term foreign bank credits coming due.
32. But, as Noland (2000) notes, the Ministry of Finance and Economy continued to resist aggressive stimulus on confidence-related grounds. Thus the idea that the IMF forced fiscal austerity on a reluctant Korean government is too simple.
33. A weaker exchange rate would not have made life easier for Korean banks and firms with dollar-denominated assets to service, but the main problem for the corporate sector, as distinct from the banks, was high debt gearing, which amplified the effects of high interest rates, not dollar-denominated debts. (Claessens et al., 1999 are in the minority in concluding that a weaker exchange rate did more to undermine the solvency and liquidity of Korean firms than higher interest rates.) It can be argued that lower interest rates, if they also meant fewer bankruptcies and less disruption to output, would in fact have made the exchange rate stronger rather than weaker (that there existed, in effect, an interest rate–exchange rate Laffer Curve), but econometric post mortems (for example Dekle et al., 2001) have found little empirical support for the existence of this nonlinear relationship.
34. On the complexities of Korea's restructuring negotiations, see Kim and Byeon (2001).
35. Speaking of the *chaebols*, Cumings (p. 38) writes, 'President Kim has been a lifelong critic of these firms, and they have reciprocated.'
36. At the end of 1997, 14 of 27 commercial banks had measured capital below the Basel Accord's 8 percent requirement, and their actual capital was certainly significantly lower than this.
37. The main shortcoming of the financial restructuring program was the authorities' reluctance to clamp down on nonbank financial institutions, notably investment and trust companies and insurance companies. Investment trust companies did not have to disclose their asset portfolios, and their accounts were not audited. See Y. Cho (2001a). This was hardly coincidental, since many of these companies were owned and operated by still-powerful *chaebols* (see below). This failure to deal with the nonbank financial sector allowed certain borrowers to gamble for redemption and led to the investment trust company crisis of 1999.
38. The authorities had responded in similar fashion to the previous crisis, in the early 1980s, but to limited effect.
39. Noland (2000) argues that family control was actually strengthened as a result of the crisis.

40. In addition, some banks have been reluctant to realize losses for fear of what this would do to their already fragile balance sheets.
41. See Y. Cho (2001b) for details.
42. Mako (2002), p. 23.
43. The banks might defend their practices on the grounds that many of these companies could be expected eventually to return to profitability, but after two and a half years of strong growth this interpretation is questionable; it is hard to believe that lobbying by the borrowers played no role in these lending decisions.
44. The Commercial Code and Securities Law was then amended to require large companies to appoint half of their directors from outside.
45. Changes in statute that increased the legal liability of controlling owners worked in the same direction.
46. In 2000, the principle of creditor takeover seemed in jeopardy when efforts to rescue some Hyundai companies preserved family interests. In 2001, financial restructurings again diluted or displaced family holdings, suggesting that the Hyundai episode may have been an aberration.
47. For another summary evaluation of corporate restructuring experience, see Mako (2001).
48. Notwithstanding the problems mentioned above.
49. Those workouts have generally proceeded under the auspices of a lead bank, and subject to extra-judicial rules for resolving disagreements as specified by the provisions of the 1998 Corporate Securities Law. Slightly different procedures have been followed for the five largest *chaebols*, the resolution of whose difficulties exceeds the capacity of even the largest banks.
50. Financial difficulties of some groups led debt/equity ratios to rise again in 2001; thus, Hyundai's ratio had risen to more than 475 percent at the middle of the year.
51. Eleven of the 15 top *chaebols* had interest coverage ratios of less than 1.0 in 2001.
52. Final approval of a reorganization plan still requires the approval of three-quarters of secured creditors and two-thirds of unsecured creditors.
53. Since firms sought to retain skilled workers, supervisors and technicians with firm-specific skills.
54. For a survey of the literature on the hypothesis of a hump-shaped relationship between the degree of centralization of wage bargaining and the flexibility of labor market outcomes, see Calmfors (1993).
55. One thinks, for example, of the possibility of a future Chinese banking crisis.