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The 1997-98 Crisis and Its Aftermath

The Crisis in Korea Unfolds

The 1997 Asian financial crisis, in which Korea figures importantly but not exclusively, has become one of the most written-about subjects in contemporary economics. Thus, I have no intention here of repeating in any depth what is covered well elsewhere; rather, only a summary of main events follows.[1] Views among analysts vary as to exactly why the crisis in Korea occurred. Steven Radelet and Jeffrey Sachs (1998), for example, argue that the crisis in Korea was almost entirely a result of volatility of international financial flows. They claim that the "fundamentals" of the Korean economy were sound and that there was no reason, apart from the withdrawal of funds from Korea by international investors, why the economy should have undergone the crisis that in fact did occur.

This interpretation is, of course, somewhat at variance with the story told here. Without question, the classical macroeconomic fundamentals of Korea appeared sound in the middle of 1997; inflation was low, there was a government fiscal surplus, overall growth was positive, and the balance of payments on the current account, while in deficit, was not seriously so

1. For more detailed descriptions and analyses of the crisis, the reader should see, e.g., Goldstein (1998) or Haggard (2000). Also, Nanto and Jones (1997) provide an excellent summary and analysis of the early stages of the crisis as it affected Korea in 1997. Warr (2000) gives an analysis of the macroeconomic aspects of the crisis, and Smith (2000) offers an account of how macroeconomic and structural factors interacted as the crisis developed. Kirk (1999) provides very detailed accounts of what happened in Korea between 1997 and 1999. Chopra et al. (2002) provide both a summary of various analyses of the crisis and a thorough analysis of their own.

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and was, at any rate, improving. But at the same time, these indicators simply did not reveal the problems described in the previous chapter. Whether those problems that lurked below the positive fundamentals were so great that they could be wholly responsible for the economic crisis that ensued is nonetheless unclear. And thus it is almost certain that volatility at the international financial level played some role in creating the crisis. Also beyond question is that the deeper problems that existed in Korea prior to the crisis were revealed by the crisis. Whatever problems were largely buried beneath the surface in early 1997 were fully exposed by 1998.

But here we are less interested in the crisis per se than in its aftermath, when the Korean economy first went into a major recession and then underwent a rapid recovery, and in the subsequent policy changes that were meant to correct the problems that were exposed. The recession was abrupt and deep, but very short-lived. GDP growth was negative 6.7 percent in 1998, rebounded to positive 10.9 percent in 1999 and positive 8.8 percent in 2000, but dropped to 3.0 percent in 2001 (Bank of Korea, *Monthly Economic Bulletin*, various issues). Growth picked up somewhat during the first half of 2002, but there is quite a lot of uncertainty regarding growth during the second half and further out (for a summary of forecasts, see, e.g., Lowe-Lee 2001).

I have been arguing that Korean firms were particularly vulnerable to bankruptcy in the event of an economic downturn. And, indeed, widespread bankruptcy, in some cases involving very large firms, did occur in Korea following the crisis (see Krueger and Yoo 2002). Moreover, at the time of this writing Korean policymakers have yet fully to sort out the problems created by these bankruptcies and to address the problems that caused the bankruptcies in the first place. Even so, policies have been implemented that are likely to forever change how Korean firms do business; at the same time, the structure and conduct of many of Korea's largest firms have also changed.

But let's take up events from where we left them at the end of the previous chapter. Despite numerous indications of trouble in early 1997, Korean economic growth during the first six months of 1997 was quite robust. Thus, international lenders to Korea seemed to be confident that Korean firms and banks would encounter no barriers to repaying the short-term international loans that had been flowing to them. But the possibility of problems ahead began to register early in July, when Thailand was forced to ask the International Monetary Fund (IMF) for assistance to meet international obligations. On August 11, the IMF announced a "rescue package" to Thailand of more than $17 billion, some of it from IMF resources and some of it from other Asian nations, mostly Japan. Only a few days later, Indonesia floated the rupiah, which then plunged in value, signaling that this nation too was having severe difficulties in meeting international obligations.

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The weakness of the rupiah affected Korea because Korean banks had lent significant sums to Indonesian banks. The Korean won began to depreciate, hitting a record low of 911 to the dollar on August 19. On October 8, Indonesia announced that it would have to join Thailand in seeking IMF assistance. Simultaneously, conditions elsewhere in Asia were deteriorating. In a surprise move, the central bank of Taiwan devalued its currency on October 18. The Hong Kong Currency Board raised interest rates on October 19 and, in response, the Hong Kong stock market plunged. In Korea the depreciation of the won hastened, despite Bank of Korea intervention on an increasingly large scale. On October 30 the won hit what had been declared as the value that would trigger massive intervention, but it kept depreciating. During November, the won repeatedly broke through levels that the Bank of Korea had very recently announced as ones that the currency would never be allowed to reach.

A climax of sorts was reached on November 17 when the Bank of Korea spent billions of dollars attempting to keep the won from falling through the level of 1,000 won to the dollar, to no avail. The next day the Bank of Korea recommended to the Ministry of Finance and Economics that the nation seek an IMF bailout loan; the day after that (November 19) the finance minister, Kang Kyong-shik, resigned and the Bank of Korea announced that it would stop defending the won. On the 25th, it became publicly known that an IMF team had arrived in Seoul and was examining the books of the Bank of Korea. Good news of continuing strong growth in the economy was ignored completely by markets on the 28th.

By this time, international lenders, especially Japanese banks that were heavily invested in Korea, were refusing to turn over short-term loans. According to Jwa Sung-hee and Huh Chan-guk (1998; cited in Noland 2000), 80 percent of loans coming due were refinanced, but this "rollover rate" fell to 50 percent in November and then to 30 percent in December. On December 2, the Korean stock exchange was forced to suspend trading on nine merchant banks.

After a number of false starts, on December 3 the IMF and the Korean government announced a package of about $57 billion in stand-by credits for Korea. Of this sum, $21 billion would be from the IMF itself, while the World Bank would contribute $10 billion, the Asian Development Bank $4 billion, the US government $5 billion, and several other countries $1 billion each. The package came with a large number of conditions attached, many of which were subsequently modified.[2] (Some of these conditions in fact were urged by reform-minded Koreans who were consulted by the IMF.) A news conference to announce the agreement that morning was postponed and the media informed that final agreement on the bailout

2. A summary of the IMF conditions under the IMF stand-by agreement (first letter of intent) with Korea is provided by Young S. and Kwon (1998). Detailed descriptions are found in Sohn and Yang (1998); see also Wang and Zang (1998).

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would not come for several days; but then several hours later, the conference was reconvened to announce that the "stand-by agreement" had been reached after all.

Perhaps because of a carnival-like atmosphere surrounding the announcement of the stand-by agreement, markets remained unstable and the won kept falling even after December 3, reaching 1,790 to the dollar on December 12. On December 15 the Bank of Korea raised interest rates and simultaneously announced that the won would henceforth float freely, as per the agreement with the IMF. The won promptly appreciated to 1,400 won to the dollar. But then in the days that followed it plummeted again, possibly because of worries in the market over statements by presidential candidate Kim Dae-jung to the effect that if elected president, he would not adhere to the agreements with the IMF.

On December 18, Kim won the election, aided by the strong backing of Korean labor unions. He immediately indicated that he indeed would abide by the agreements. On December 23 the Bank of Korea, with the agreement of the IMF, raised the repurchase rate on won (the rate at which Korean banks could effectively borrow funds) to almost 30 percent. Also, a "standstill agreement" was reached between foreign banks and the Korean government whereby the former agreed not to withdraw further funds from Korea. The US Treasury helped to broker this agreement. The won subsequently stabilized at close to 2,000 won to the dollar—about 40 percent its worth in early July (in terms of the dollar). Thereafter, the won began to appreciate, albeit erratically.

Interest rates were held high for almost three months, well after it became clear that the free fall of the won was over. These rates were then allowed to fall, but only slowly. The IMF subsequently admitted that it had been an error to hold interest rates so high for so long, even if high rates were initially necessary to stem the depreciation of the won.[3] In particular, the prolonged high interest rates were seen as almost surely having induced the major recession that followed. The IMF also had stressed in December fiscal austerity on the part of the Korean government, so that the small public deficit would be turned into a fiscal surplus; the reasoning was that this would generate for the government the funds that would be needed to cover the costs of financial restructuring. Thus, both monetary and fiscal policy sought by the IMF as conditions for stand-by credit were contractionary. (See OECD, *OECD Economic Surveys: Korea 1999*, chapter 2, for an analysis of macroeconomic policies followed by the Korean government under IMF guidance during the early months of 1998.) The IMF initially forecast that even under these policies, real growth in Korea would be about 3 percent. Yet the real growth rate in 1998 was –6.7 percent

3. For three different views on this, see Chopra et al. (2002), Cho Y. (2002), and Chung and Kim (2002).

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The severity of the recession in fact reflects the indebtedness of Korean corporations. Kim Se-jik and Mark Stone (2000) use econometric analysis to show that both falls in output and rises in rates of bankruptcy in all the afflicted East Asian nations in the wake of the 1997 crisis were positively related to corporate leverage. In other words, the higher the use of corporate leverage, the greater the fall in output and also the greater the number of bankruptcies, controlling for a number of other variables—exactly the result that a financial analyst would predict. And as the 1998 recession took hold, bankruptcies began to mount. By the end of the year, these included 11 groups on the Korea Fair Trade Commission's 1997 list of the top 30 (reproduced as table 5.1). The largest of these were Kia and Jinro, which had reported difficulties in 1997, and Newcore. Both groups filed for reorganization. During 1998 they were joined by Halla (founded by the younger brother of Hyundai founder and chairman Chung Ju-yung, and now run by Chung's nephews) and the Hanil Keopyung, and Haitai groups. The smaller Dongha, Shinho, Kohap, and Hanwha groups all were bankrupt as well but were kept running by means of syndicated loans under the antibankruptcy pact, as was also the case for four other small groups.

By the late fall of 1998, the won had reached an approximate rate of 1,200 to the dollar, and the exchange rate subsequently stabilized in this range. In 1999 growth turned positive, and this trend continued into 2000. The crisis and recession were over not much more than one year after the crisis first hit, but the problems that were revealed were many and deep.

Financial Sector Reform

Even if the short-term conditions imposed on Korea by the IMF for stand-by credit were, in hindsight, not wholly wise, the IMF did recognize many of the long-term weaknesses that had developed in the Korean economy that were responsible for the depth of the recession.[4] To correct them, the IMF focused in its stand-by conditions on four areas: financial sector reform, industrial sector reform, privatization of state-owned enterprises, and labor market reform.

At the top of the list was financial sector reform, which had already been recognized as a priority in the final year of Kim Young-sam's presidency. The IMF reforms, which in many aspects mirrored those suggested by the Presidential Commission on Financial Reform one year earlier, fell into three broad categories: those pertaining to the central bank (the Bank of Korea) and the financial supervisory system, those

4. Some of these weaknesses have been touched on in earlier chapters; additional aspects of financial sector weakness in Korea are discussed by Koh and Ji (2000).

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Table 5.1 Top 30 chaebol in Korea, June 1997

Rank	Name	Debt-to-equity ratio[a]	Number of subsidiaries	Bankrupt in December 1998
1	Hyundai	5.8	57	
2	Samsung	3.7	80	
3	LG	5.1	49	
4	Daewoo	4.7	30	
5	SK	4.7	46	
6	Ssangyong	4.0	25	
7	Hanjin	9.1	24	
8	Kia	n.a.	26	X
9	Hanwha	12.1	31	X
10	Lotte	2.2	30	
11	Kumbo	9.4	26	
12	Halla	20.7	18	X
13	Dongha	3.6	19	X
14	Doosan	5.9	25	
15	Daelim	5.1	21	
16	Hansol	4.0	23	
17	Hyosung	4.7	18	
18	Dongkuk	3.2	17	
19	Jinro	37.6	24	X
20	Kolon	3.2	24	
21	Kohap	4.7	13	X
22	Dongbu	3.4	34	
23	Tongyang	4.0	24	
24	Haitai	15.0	15	X
25	Newcore	17.1	18	X
26	Anam	15.0	21	
27	Hanil	5.8	7	X
28	Keopyung	n.a.	22	X
29	Kiwon	n.a.	25	
30	Shinho	6.8	25	X

n.a. = not available

a. Nonfinancial subsidiaries only; last year available for bankrupt firms.

Note: This table excludes Hanbo, in the process of being liquidated in July 1997.

Source: Korea Fair Trade Commission; debt-to-equity ratios from OECD, *OECD Economic Surveys: Korea 1999*.

pertaining to opening up the financial sector, and those pertaining to restructuring the financial sector.

In the first category, pertaining to the Bank of Korea and the financial supervisory system, the IMF essentially wanted to carry out fully those reforms that had been called for by the earlier Presidential Commission but that had been only partially implemented in the final months of Kim Young-sam's presidency. Thus, for example, the Bank of Korea had already been made independent of the Ministry of Finance and Economics

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(MOFE). Also, most financial supervisory responsibility had been removed from the Bank of Korea and those functions placed under MOFE, leaving the bank's focus on monetary management. Under the IMF reforms, all supervisory functions were transferred to a new Financial Supervisory Board (FSB) that was independent of MOFE and would report to the prime minister. Also, under the new arrangement, either the Bank of Korea or the FSB would be allowed to request bank inspections, which would be carried out jointly by the FSB and the Bank of Korea. The FSB would have full and final authority to determine what, if any, corrective actions would be taken.

The IMF conditions called for the passage of legislation to enable various financial institutions (banks, insurance companies, securities institutions, and other nonbank financial entities) to enter each other's lines of business in order to increase competition within the Korean financial sector. This change was sought because research findings indicated that financial stability in nations tends to be enhanced when different types of financial institutions are allowed to compete with one another. To this end, existing securities and insurance supervisory agencies in Korea were to be merged into the FSB. The merger was actually accomplished in April 1998, when the Financial Supervisory Commission (FSC) was created, taking over the functions of four different financial regulatory agencies (those covering banks, securities, insurance, and all other nonbank financial institutions). The FSB remained as the executive body of the FSC.

IMF conditions regarding the second category (opening up the financial markets) also largely followed the recommendations of the earlier Presidential Commission, though on a much-accelerated schedule for implementation. The main objective was to liberalize long-term capital accounts (as noted above, short-term accounts had already been liberalized following Korea's membership in the OECD). Accordingly, restrictions on foreign ownership of stock in Korean firms were first to be relaxed and then eliminated entirely, in order to enable foreign takeovers of Korean firms. The bond market was opened to foreigners, so that foreign investors could hold any type of Korean bond (private or government-issued), although a foreign investor was temporarily restricted to holding no more than 30 percent of the total of any one type of bond outstanding. This restriction was lifted at the end of 1998.

One result of these reforms was that foreign direct investment flow into Korea jumped considerably, from $6.97 billion in 1997 to $8.85 billion in 1998, even though 1998 was a recession year (FDI flow is typically sensitive to the business cycle). This increase was in accordance with efforts of the new administration to reverse what had been a de facto Korean policy to discourage inward FDI. In contrast to earlier years, about a third of FDI in Korea was of the form of acquisitions. There is some evidence that this FDI brought benefits to Korea (Kim June-dong 1999; Yun 2000). In spite of the large increase, however, the total flow of

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FDI to Korea relative to the size of the economy remained minuscule; indeed, Korea's ratio of FDI to GDP remained among the lowest both in Asia and among the OECD nations.[5] Also, the jump in 1998 was not actually as great as that in 1997. As just noted, FDI flow in 1997 had been almost $7 billion; in 1996 the flow had been only $3.2 billion, and it had been $1.9 billion in 1995.[6] Thus, the 1998 figure represented, if anything, the slowing of a trend that had begun several years earlier.

Reforms in the third category, having to do with financial restructuring, were the most pervasive. With some exceptions, they were carried out with more vigor and determination than were seen in earlier efforts at financial sector reform. Three sets of reforms were called for. The first was to perform triage, identifying banks and other financial institutions that were unviable. The second was to define clear exit strategies for those institutions: these included complete closure; takeover of unviable institutions by viable ones, without unduly endangering the financial health of the latter; and restructuring plans for those institutions judged to be salvageable. The third was to establish a timetable under which all Korean banks would meet the so-called Basel capital adequacy standards as established by the Bank for International Settlements (BIS).

Importantly, in implementing these reforms, the FSC adopted what was termed the "prompt corrective action" (PCA) system. Under this system, bank supervisors were required to measure banks and other financial institutions against specific quantitative risk indicators and, where these indicators suggested inadequacies, to take prompt corrective action. As well as introducing new, specific quantitative indicators, the PCA system was intended to signal a new attitude on the part of the supervisory authorities: regulatory forbearance would no longer be practiced. At the same time, the FSC indicated that it would not attempt to micromanage banks, but rather would distance itself from internal operating decisions while insisting that high prudential standards be maintained, as verified by the quantitative risk indicators. Specific indicators included the BIS capital adequacy requirements and analogous requirements for nonbank financial institutions. Certain other quantitative measures were devised that were based on best practices as defined by international organizations of supervisory authorities.

Should an institution fail to meet the thresholds demanded by these indicators, FSC supervisors could issue three levels of corrective procedures: management improvement recommendations, management improvement requirements, and management improvement orders. (Details of these escalating procedures can be found in OECD, *OECD Economic Surveys: Korea 1999*, chapter 3.)

5. For possible reasons why, see Beck (1999) and Yong (1999).

6. International Monetary Fund, *International Financial Statistics*, various issues.

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To help carry out the restructuring, the Korea Deposit Insurance Corporation (KDIC) was created; it was meant to provide bank depositors with limited deposit insurance that in turn was paid by the banks themselves. In fact, to prevent a run on the banks, the government in late 1997 had implemented an emergency measure to guarantee all deposits in the banking system until 2001; the limited deposit insurance scheme thus was to kick in after these blanket deposit guarantees expired, and it came into effect on schedule. The premiums paid for such insurance were to be based on the soundness of the bank as measured by prudential standards set by the FSB. In addition, the KDIC helped with the recapitalization of certain banks by purchasing new equity in them, and it reimbursed depositors in some nonbank financial institutions where those institutions were unsound or bankrupt and deposits were at risk.

In late 1997, before the IMF intervened, the Korean government had created the Korea Asset Management Corporation (KAMCO) to purchase nonperforming loans and other "impaired assets" from banks and other financial institutions when the viability of these institutions was threatened. The creation of KAMCO was one of the recommendations of the Presidential Commission. In early 1998, under the IMF reforms, the role of KAMCO was supplemented by the creation of a "bridge merchant bank" (Haneurum Merchant Bank) whose role was to resolve the insolvencies of merchant banks.

The Korean government in fact got off to what the IMF considered to be a slow start in carrying out the restructuring agenda: it refused to close two large but insolvent banks, Korea First Bank and Seoul Bank, that the IMF wanted shut down (Noland 2000). Instead, these were nationalized in the weeks before Kim Young-sam left office. Subsequently, however, the FSB required that all banks not already meeting the Basel capital adequacy requirement as of the end of December 1997 submit rehabilitation plans. Out of 25 banks operating in Korea at that time (not including the 2 that had been nationalized), 12 were required to submit plans. In June 1998 the FSB found that 5 banks out of 25, including 3 of the 17 banks that operated nationally, had submitted "infeasible" plans. These banks were suspended and acquired by other banks deemed to be sounder under programs that enabled KAMCO to buy the banks' nonperforming loans and other "impaired assets." Also, KDIC injected new capital funds into the banks, thereby becoming a major shareholder in these banks and thus effectively bringing them under government control. The remaining seven received conditional approval but were put under close supervision.

At the same time, negotiations were initiated to sell both Korea First Bank and Seoul Bank to foreign investors. The first sale was completed after protracted and often rocky negotiations with Newbridge Capital. But the latter deal fell through, largely because the FSB and the bidder (HSBC, formerly the Hong Kong and Shanghai Banking Corporation)

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could not come to agreement over the definition and resolution of nonperforming loans.

Overall, there was much success in the restructuring of the banking subsector in Korea in the 18 or so months following the crisis (Organization for Economic Cooperation and Development, *OECD Economic Surveys: Korea 1999*). The number of commercial banks had been reduced to 17 by early 1999, largely as the result of unsound banks merging into more sound ones, and the number of employees had fallen by a third. Almost all of the surviving banks met the Basel capital adequacy requirements. However, as I shall argue shortly, less progress may have been made than the early claims for victory might suggest (see Park Y. 2000a). The main reason for skepticism concerns the assumption of nonperforming loans by KAMCO and the acquisition of major equity positions in the banks by KDIC; the Korean government thus became the controlling agent holding the majority of the assets of the Korean banking system, which included huge amounts of "impaired assets."

By the end of 1998, the FSB had also shut down 16 merchant banks and incorporated their operations into Haneurum Merchant Bank; out of a total of 30 merchant banks in operation at the end of 1997, only 18 survived. Also, 2 securities companies out of 34 were shut down, as well as 4 insurance companies out of 50; however, 5 companies accounted for almost 80 percent of the assets of the industry, 3 of which were affiliates of the top 5 chaebol, and none of the top 5 was shut down. Finally, 2 investment trust companies (out of 31) were closed. By the end of 2000, there had been further consolidations: the number of commercial banks was down to 11, the number of merchant banks was down to 9, and the number of investment trusts was down to 8. In April 2001 a large financial holding company was created by the government—the Woori Financial Group—that was to own 4 commercial banks (including the large but troubled Hanvit Bank), 1 merchant bank, and 11 other nonbank financial subsidiaries. The plan was that it would be a "test case" for creating a more advanced and competitive financial institution in Korea.

During these 18 months and in spite of the consolidation reported above, there was much less progress in restructuring the nonbanking subsector than the banking subsector (Organization for Economic Cooperation and Development, *OECD Economic Surveys: Korea 1999*). The main problem was that certain of these institutions, especially insurance companies and investment trust companies, were able to use various accounting practices to hide their true losses and the extent of nonperforming assets. Related to this problem were ownership linkages between the financial institutions and the chaebol, ensuring that nonperforming assets in the former were mirrored by loss-making operations in the latter. Thus, by March 1999 the total amount of nonperforming loans held by nonbank financial institutions exceeded significantly the total of such loans held by the banks; in addition, nonperforming loans as a percentage of total

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loans were significantly higher in the nonbank institutions than in the banking sector. And, as just suggested, the full extent of nonperforming loans was less certain in nonbank institutions than in the banks.

Importantly, the financial sector reform judged successful by the OECD mostly entailed restoring the immediate health of financial institutions. Such restoration did not necessarily imply that full and adequate steps had been taken to ensure that the past practices of these institutions—the practices that had helped to create the problems in the first place—were corrected. Rather, steps had been put in place to strengthen the balance sheets of the institutions, often with conditions attached that were meant to improve the practices of the institutions. To achieve this strengthening, the government took equity and long-term loan positions in banks and also bought bad loans from the banks and then attempted to resell them, taking losses in doing so that ultimately would have to be borne by Korean society.

The main vehicle for buying the banks' bad debts was KAMCO. In its first months, KAMCO injected money into the banking system by purchasing subordinated debt issued by the banks (Claessens 1999); it also bought nonperforming loans, in some cases arguably throwing good money after bad (Noland 2000). As a safeguard, beginning in April 1998 the purchase of nonperforming loans by KAMCO and injection of new capital into the banks by KDIC were both conditioned on a number of actions being taken by the banks themselves, notably the carrying out of the mergers already described and the raising of new equity capital from nongovernment investors. KAMCO did buy "impaired assets" (mostly nonperforming loans) from the banks and, in some cases, nonbank financial institutions at prices well above the true market value of those assets (in most cases at face value). Given that the purchases conveyed an implicit subsidy to the banks, it was quite reasonable that conditions for bank improvement should be attached to them.

KAMCO in 1998 was largely unable to dispose of the assets it acquired, even by selling them at a considerable discount. The situation improved in 1999, when arrangements were made by which KAMCO was able to sell some of these assets to foreign firms. Marcus Noland (2000) notes that during 1999, KAMCO was able to sell about 22 billion won of the more than 55 billion won of "impaired assets" it had acquired, for which it only received about 12 billion won, or about 55 percent of their face value.

The difference between the price as paid for such assets (usually face value) and the price as received by KAMCO largely determined the cost of the cleanup of Korea's financial sector. The total cost also included any capital losses incurred by KDIC upon selling the equity it had acquired in banks and other institutions to the public and the costs of refunding any deposits that were guaranteed. Robert Aliber (1998) has estimated that the total cleanup cost would eventually be about 30 to 35 percent of Korean

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Table 5.2 Public funds used for Korea's financial sector restructuring, January 1, 1998-June 30, 2001
(billions of won)

	Recapitalization	Deposit repayment	Asset purchase	Non-performing loan purchase	Total
Banks	44.3	—	13.2	29.0	86.5
Nonbanks	20.9	20.0	0.9	11.9	53.7
Total	65.2	20.0	14.1	40.9	140.2

Source: OECD, *OECD Economic Surveys, Korea, 2001*, table 38, as reported by the Korean Ministry of Finance and Economics, 2002.

annual GDP, a figure that clearly is quite high but one that Aliber calculated to be manageable.

In late 2001, the Korean government issued a report indicating the total public funds spent for financial restructuring from the crisis through June 30, 2001. This total was 137.5 trillion won, or about 26 percent of GDP for the year 2000 (though of course these funds were spread over two and a half years). The breakdown is indicated in table 5.2. It is important to note that these reported "costs" are in fact the realization of losses that have already occurred, and are not new costs imposed on the economy. More specifically, they result from losses borne by banks and other financial institutions being reallocated to society at large—that is, to taxpayers.

Ultimately, the effectiveness of the financial sector reform depends on resolving those problems that caused the situation in the first place—that is, taking steps to avoid the accumulation of nonperforming loans to the point that these loans can threaten the viability of the whole Korean financial sector. Such loans were largely made to firms in the industrial sector in Korea, specifically to the chaebol. Thus while a thorough reform of the financial sector has been absolutely necessary in Korea, the problem of nonperforming loans could recur even after the current portfolio of such loans has been wiped clean unless the industrial sector were to be reformed as well. But reform in that sector has progressed much more slowly after the crisis.

Erratic Reform in the Industrial Sector

The IMF in fact recognized that reform in Korea would have to encompass the industrial sector, and in particular the chaebol, if the overall effort to reform the Korean economy was ultimately to succeed. Thus, in

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the various "letters of intent" agreed on between the IMF and the Korean government, there was general agreement that reform in the industrial sector should take place. However, while reform measures pertaining to the financial sector were specific and concrete—for example, the creation of the FSC, KAMCO, and KDIC and the specification and implementation of explicit reform strategies that they should undertake—those specified for the industrial sector often tended to be rather abstract and nonspecific. For example, the IMF program called for more transparency, better corporate governance (including management that would be more accountable to shareholders), reduction of entry barriers to specific sectors, stock market revitalization, privatization of government-owned enterprises, and resolution of nonsolvent nonfinancial firms (by forcing them to exit the market, if necessary). All these reforms were necessary, but exactly how to implement them was left unclear in the letters of intent.[7]

Following the crisis, a number of reform measures were in fact attempted. But as time passed, meaningful progress toward implementing reform in the industrial sector was at best erratic and, at the end of the day, rather scant. The dire financial status of firms in the Korean industrial sector was not in fact fully appreciated until the spring of 1998, when the Hong Kong office of the US investment banking firm Goldman Sachs and Company released a study that gave pause in Seoul. The study included estimates of interest coverage ratios of the 30 largest Korean groups as identified by the Korea Fair Trade Commission (KFTC). This ratio is defined as the cash flow (i.e., earning before tax plus depreciation and amortization charges, which are noncash expense items allowed as tax deductions but which do not reduce cash generated by the business) divided by interest charges on both long- and short-term debt held by the group. The estimates were based on disclosed debt. Given that the groups typically had undisclosed debts, these published interest coverage ratio estimates likely overstated the magnitudes of the true ratios for many if not all groups. The ratios for the top 10 groups, along with the underlying data used to calculate these ratios, are given in table 5.3.

Financial analysts consider the interest coverage ratio to be an important measure of the financial health of a firm or group of firms. A ratio of 3.0 or greater is indicative of a financially healthy firm. As can be seen from the table, only 2 of the top 10 chaebol meet this criterion of health, Samsung and Lotte (the latter, as noted in chapter 1, is largely a retailer and hotel chain and not an industrial chaebol). A ratio of 2.0 or less is indicative of poor financial health, and 6 of the 10 failed to have

7. An indicator of this vagueness is that the text of Wang and Zang (1998) describing adjustment reforms in Korea in the wake of the financial crisis is 189 pages, excluding annexes. Of these, 75 pages describe the IMF programs but only 5 are devoted to programs pertaining to the nonfinancial corporate sector. The remaining 114 pages describe progress in the implementation of this program. Of these, 7 pages treat the nonfinancial corporate sector—mainly discussing future reforms not yet implemented.

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Table 5.3 Estimated interest coverage ratios, 10 largest chaebol in Korea, early 1998

Group name	Sales	Operating profit	Cash flow	Interest expense	Coverage ratio
Hyundai	68.19	2.67	4.32	2.75	1.6
Samsung	61.35	3.03	5.49	1.81	3.0
LG	41.19	2.27	3.56	1.57	2.3
Daewoo	38.95	2.25	2.74	1.96	1.4
SK	21.44	1.44	2.67	1.02	2.6
Ssangyong	18.73	0.42	0.70	0.70	1.0
Hanjin	9.21	0.36	1.23	0.61	2.0
Kia	11.96	0.67	1.13	0.93	1.2
Hanwha	7.82	0.56	0.85	0.52	1.6
Lotte	2.62	0.24	0.45	0.12	3.9

Note: Sales, operating profit, cash flow, and interest expense figures are in billions of won; figures are for listed affiliates only.

Source: Goldman Sachs and Company (1998).

interest coverage ratios above 2.0. A ratio of less than 1.0 indicates that the firm or group is technically insolvent, not generating enough cash to meet interest payments. While none of the top 10 had an interest coverage ratio less than 1.0, a number of groups in the next 20 did—for example, the Shinho group, number 30 on the KFTC list, had an interest coverage ratio of 0.6. The Ssangyong group, one of the major winners during the HCI drive but a group that struggled throughout the 1980s and 1990s, showed a ratio that, at 1.0, placed it perilously close to insolvency. An interest coverage ratio above 2.0 but below 3.0 represents an intermediate case, neither financially healthy nor clearly sick. Two of the groups, LG and SK, had coverage ratios in this range. The low interest coverage ratios of the Hyundai and Daewoo groups might have suggested to financial analysts that neither of these groups could afford to take on additional debt. But as we shall soon see, this indicator was very much ignored in the months that followed the crisis.

A second report that appeared in 1998, this one prepared by the US management consulting firm McKinsey and Company (McKinsey 1998), also gave pause in Seoul. It examined the productivity of labor and capital in major Korean manufacturing and service sectors and compared Korean firms operating in these sectors with firms that were world leaders. Most of the analysis concerned the year 1995; in some cases, 1994 or 1996. The findings were stark: in most manufacturing sectors, productivities of both capital and labor (output per unit input) in Korean firms were shown to be only about half the levels found at the leading firms of the United States. That the productivity of labor was lower than in the United States was not really surprising, given that real wages in Korea (indicative, at

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least in theory, of the marginal product of labor) were also much lower than in the United States. Given lower wages, it in principle would be consistent with efficiency maximization that Korean factories employ more workers than equivalent factories in a higher-wage economy. However, the finding was that levels of staffing in Korean manufacturing operations were excessive when compared to equivalent US operations even after accounting for lower wages. This would imply that Korea could enjoy efficiency gains from reducing labor in such operations. In contrast to the conclusions regarding labor productivity, those regarding levels of productivity of capital—also significantly lower in Korea than in the United States—were surprising because, relative to the United States, in 1995 Korea was still a capital-poor country.[8]

Strictly speaking, the McKinsey findings pertained to average capital productivity and not marginal productivity, but it is a reasonable inference that if average productivity of capital was lower in Korea than in the United States, so too was marginal productivity. Thus, these findings tended to corroborate earlier empirical studies concluding that rates of return on capital in Korea had been falling since the 1970s. Moreover, the McKinsey results tended to confirm that bankruptcy risks in many Korean firms were rising.

The McKinsey report also noted that the relatively low productivity of capital in Korea was not, by and large, the result of Korea lagging other countries in terms of its technology. Because Korea had invested heavily in human capital development and in acquiring the best available technology, by 1998 technological lags were no longer much of a factor. The low productivities in manufacturing, according to McKinsey, were instead caused by poor governance of both industrial and financial institutions.[9]

As might be expected, the results varied considerably across industries.[10] Somewhat embarrassing perhaps to those who advocate private ownership of industry as a prerequisite to efficiency, Korea did very well in steelmaking, the sector dominated by then state-owned Pohang Iron and Steel Company (POSCO).[11] Labor productivity in this sector was 108 percent that of the United States and capital productivity 115 percent; thus, in steel Korean firms outperformed those of the United States. Interestingly,

8. In 1995, in the manufacturing sector, the amount of capital per worker in Korea was about 80 percent that of the United States.

9. In this regard McKinsey (1998) provides an interesting contrast to sectoral studies during the mid-1990s published by Koreans including Kim Y. (1995), Rhee (1996), and Kim Doo-suk (1996), who all see the main problem facing Korean firms as centered on technological backwardness.

10. The results that follow are largely based on case studies of individual firms.

11. However, McKinsey (1998) did identify numerous distortions in the Korean steel market that could be traced to government ownership of POSCO (e.g., subsidized production that reduced returns on investment to POSCO, discussed below).

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and perhaps of comfort to the advocates of private ownership, return on capital invested in the largely privately owned downstream processing sector in Korea was shown to be even higher than in POSCO—in part, however, because POSCO delivered very low-cost crude steel to the processors. It seems to have been an unwritten rule in Korea that POSCO would not enter the business of the downstream "mini-mills," which in turn are largely blockaded from entry into primary steel production. As part of the IMF reforms, the Korean government agreed in 1998 to privatize POSCO by selling shares to the public. This process is now almost complete.

In automobiles, the productivity of labor in Korean firms was on average 48 percent that of US firms, and the ratio between the two for capital productivity was also 48 percent. In this sector, the international leader was not a US firm but rather the Japanese firm Toyota. McKinsey (1998) noted that Hyundai Motor Company's labor productivity in 1996, measured in terms of vehicles per worker, was barely half of what Toyota's had been in 1974. Furthermore, between 1954 and 1974 Toyota raised its labor productivity at a much faster rate than did Hyundai between 1976 and 1996. (According to McKinsey 1998, this comparison between two different 20-year periods was most apt, because in those spans of time Toyota and Hyundai each established itself as a major international producer.) Thus, McKinsey found not only that Hyundai lagged far behind the world's leading auto-producing firm in terms of productivity, but also that the gap was not being closed.

One finding of McKinsey was that the Korean automotive sector was still heavily sheltered from imports in 1995. Such sheltering apparently had a counterproductive effect on the Korean sector's performance. Because Korea had become the world's fifth-largest auto-producing nation, the case for infant-industry protection in Korea had long ceased to be valid by 1996 (if indeed it ever had been; see the discussion in chapter 2). Rather, high levels of protection seemed to coddle the sector, giving rise to perverse incentives for Korean auto producers not to make necessary efficiency-enhancing improvements in their operations. One of the elements missing in the Korean industry, for example, was lean production as pioneered in Japanese firms and adopted in large measure by American and European firms. The main symptom of its inefficiency was excessive labor. Thus, the study recommended that the government take measures to ensure that Korean automotive firms would be able to lay off workers, because "until Korean [automobile] companies can release workers, labor and capital productivity will be kept to low levels" (McKinsey 1998, 12). But as we shall see shortly, the actions taken in the Korean automotive industry in the aftermath of the crisis were, by McKinsey's reasoning, the very opposite of what was called for. While McKinsey indicated that Korean auto manufacturers did need to upgrade their technology, the recommended emphasis was less on the side of product design (the focus

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of the XC-5 program) than on the side of manufacturing and production technology.

In semiconductors, Korean firms' capital productivity was 54 percent that of their US competitors; labor productivity, 52 percent.[12] Most of the discrepancy was due not to differences in unit output per unit of capital or labor, but rather to a different mix of products. In particular, Korean firms' production was heavily concentrated (75 percent) in dynamic random access memory chips (DRAMs), which by the mid-1990s were becoming a commodity item. Much of the rest of the product mix was accounted for by standard logic chips, which were also becoming items of relatively low unit value. In the production of these chips, McKinsey (1998) found that Korean productivity levels in 1996 were comparable with the average of US manufacturers though behind those of the US industry leader (Micron). Assembly of chips was somewhat more labor intensive in Korea than in Japan or the United States, and there were some other residual operational differences. Unlike in automobile manufacture, however, the operational gaps between Korean firms and the best international firms were closing quickly. McKinsey suggested that one of the main weaknesses in the sector in Korea was a lack of design engineers who could devise products with higher unit value.[13]

Consistent with the analysis in chapter 4, McKinsey (1998) found that one of the main vulnerabilities of Korean firms in this sector was the highly cyclical nature of demand for semiconductor products, which creates a very volatile price trajectory. Indeed, as already argued, one reason for the slowdown in growth in Korea in 1996 and 1997 was a downturn in demand for these products. In 1999, rising demand (and rising prices) in this sector would play a substantial role in bringing Korea out of recession. Domestic demand also would prove to be a major factor in the decline in GDP growth in 2001 and the subsequent pickup in 2002 (Cashin and Liang 2002).

A further finding of McKinsey (1998) was that Korean firms lagged the world's leaders further in service sectors than in manufacturing. The reasons for this, by McKinsey's analysis, had much to do with regulations in Korea that limited competition for many services. One important result was the relatively high cost of many services, and these costs in turn reduced the competitiveness of Korean manufacturers.

The McKinsey study was largely prepared before the onset of the crisis, but toward its end it contains a section on the crisis that was clearly added after the main body of the report was complete. This section argued that the crisis was more than a result of a liquidity problem, as argued by Steven Radelet and Jeffrey Sachs (1998) among others. Rather, McKinsey

12. But note that the best Korean semiconductor firm, Samsung, apparently did not participate in the study.

13. Many of these same findings were also reported by Ernst (2000).

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(1998) concluded that the crisis "was largely caused by low capital productivity, especially in capital-intensive manufacturing industries," and by the fact that "companies continued (in the face of declining returns on capital), with the support from banks, to make undisciplined capital investments in pursuit of growth."

The McKinsey results are buttressed by the findings of Kim Won-kyu, reported by Sri-Ram Aiyer (1999). Kim concluded that rates of total factor productivity growth in Korea in most sectors were slower during the period 1990-96 than in the period 1980-89. As explained in chapter 2, total factor productivity (TFP) is the residual factor left when growth of output cannot be accounted for by growth of measurable tangible factors such as capital and labor (and, in some specifications, human capital). It is generally thought to be (or to closely approximate) growth that results from technological change. Kim's finding thus was that the rate at which Korean output was responding to technological change was slowing during the 1990s, suggesting (consistent with other evidence) that overall growth during this time was being driven largely by simple expansion of capacity rather than by increases in efficiency, as technological progress would tend to bring. As noted earlier, findings by William Zeile (1991b) and others suggested that by contrast, during the earlier period 1970-85, TFP growth had been very rapid in many sectors.

Problems in the Korean industrial sector were well recognized even before the onset of the crisis, of course, and some efforts were made to address them in its immediate aftermath. Beginning very early in 1998, for example, the government, following the wishes of president-elect Kim Dae-jung, indicated that the chaebol (including the largest groups) should henceforth identify and concentrate on core businesses and should exit noncore businesses. Even before he was inaugurated, between January 13 and February 6, Kim had met and made agreements with chaebol chairmen that in order to achieve the necessary specialization, the groups would designate from three to six core businesses and that they would swap assets among themselves, in what came to be known as the "big deals." This was not the first time that such an approach had been tried; as discussed in the previous two chapters, elements of the same idea were present in earlier efforts to sort out the "unsound" companies that emerged during the HCI drive and its aftermath. Also, during the last years of Roh Tae-woo's presidency, mergers were attempted as a means of resolving weak businesses. The approach had been found wanting in the past, largely because even once the acquired firm was merged into a "sound" firm, insufficient action was taken to correct the causes of its "unsoundness." Instead, cash flow from strong operations generally was used in effect to subsidize the losses of the weak operations.

According to Yoo Seong-min (1999), who expresses open skepticism of the big deals, their main rationale was that through swaps, "excessive and duplicative" investments by the chaebol could be eliminated (but could

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this be accomplished without shutting down the least viable of these?) and scale economies could be achieved as well. Yoo also notes that an implicit element of the big deals was the creation of monopolies that would be protected from domestic competition. Given that in his book the president-elect had strongly criticized earlier government-enforced monopolies in Korea and the industrial policy that created them (Kim Dae-jung 1996), it seems curious that one of Kim's first acts when elected president was essentially to begin to implement exactly the types of policies he had written against two years earlier. Moreover, given the marked reluctance of chaebol chairmen to enter into these deals, it should have been apparent that they saw little benefit to their firms in carrying them out. There apparently was little benefit to be had even from gaining market power. Thus, as might have been expected, all the chairmen of the large groups dragged their feet when the time came to actually negotiate the big deals.

Although the big deals started as "voluntary" negotiations among the chairmen of the largest chaebol as per the agreement with Kim Dae-jung, when these negotiations failed to produce any of the desired transactions by the summer of 1998, the government stepped up the pressure for the deals to go forward. Under this pressure to produce a set of concrete actions, on October 7, 1998, the chaebol chairmen announced plans for a number of swaps, but only a few transactions actually took place thereafter.[14] These plans called for Hyundai and LG to consolidate their semiconductor operations into one operation, in the only one of the truly big "big deals" to take effect more or less as per the October plans. The October 7 plan did not specify whether Hyundai or LG would control the combined operation (or possibly run it as a joint venture); but when the deal was finally consummated in October 1999, one year after the deal had been announced, the combined operation came under the control of Hyundai Electronics Industries. As a result, Hyundai Electronics, for a time, became the world's largest producer of DRAMs, surpassing Samsung. In March 2001, as part of a general reorganization of the Hyundai group (discussed below), the name of Hyundai Electronics was changed to Hynix. Alas, size was to prove not to imply strength; Hynix began its existence as a highly troubled operation and remains so at the time of this writing; I discuss its misfortunes later in this chapter and in the next chapter as well.

The October 1998 plans also called for consolidation within the ship engine and power generation equipment sectors; there the main transaction was that Samsung Heavy Industries would be acquired by state-owned Korea Heavy Industry, which then would be privatized. The acquisition, a relatively minor one, in fact did occur in 2000. Small consolidations

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14. Cho W. (2001) argues that this pressure in fact resulted in transactions that were "lose-lose," with neither party benefiting.

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also occurred in the aircraft sector, where Korean firms were not major international producers, and in the railroad rolling stock sector. The October plans further called for consolidation of the petrochemical sector, where two mergers were envisaged. First, the operations of SK, LG, Daelim, Lotte, and Hanwha would be combined into one entity; and second, the operations of Samsung and Hyundai would be merged. Who would control the resulting entities was not specified and these deals were never completed. At the time of this writing, the petrochemical sector in Korea remains troubled.

Although not part of the October plans, a big deal announced shortly after this plan was made public was a proposed transaction in the automotive sector by which Daewoo would acquire Samsung Motors and Samsung would acquire, in exchange, most of Daewoo's electronics operations. This deal too never came to pass, largely because of the failure of the Daewoo group in mid-1999.

But another big deal of sorts did occur in the automotive sector in mid-1998, when the Korean government announced that it would seek to "denationalize" Kia by selling it to private interests. Ford Motor Company—which was, as noted earlier, a minority shareholder in Kia (directly and indirectly, Ford held a 17 percent share of Kia's equity)—expressed an interest in acquiring the firm, on condition that Kia's creditors write off 50 percent of its debt (Noland 2000). Noland notes that the deal as proposed would have made much sense for both parties, because Ford sought to strengthen its position in Asia while Kia needed the major injections of capital and technology that Ford could provide. But this was not happen. In September, the government rejected Ford's bid, reflecting the view of Korean auto executives that Kia should remain under Korean ownership—most likely because these executives feared that under Ford's control, Kia would emerge as a truly formidable competitor in the Korean auto market. (Arguably, this is just what Korea needed.) In October, control of Kia was instead awarded to the Hyundai Motor Company.

The Hyundai Motor Company had a debt-to-equity ratio of more than 5.0 and the whole group (including financial subsidiaries) a ratio of almost 6.0 in 1998. Nonetheless, Hyundai financed the purchase of Kia with debt that banks were somehow willing to advance to the firm despite the already very high levels of debt reflected in those figures. The acquisition of Kia came soon after Hyundai Motor Company had settled a prolonged and bitter strike by its labor unions that took place during the spring and summer of 1998. At issue was an effort by Hyundai to lay off workers. As noted above, Hyundai Motor Company employed far more workers than efficiency would dictate; to improve the competitiveness of the firm, a significant amount of labor shedding was unquestionably needed. However, during the strike, the government effectively sided with the unions and the workers and helped to broker a deal whereby Hyundai would not reduce its workforce except by attrition. The strike

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came at a time when unemployment in Korea was rising; moreover, Kim Dae-jung and his National Congress for New Politics (NCNP) party had received the backing of the organized labor movement in Korea during the 1997 election. But one long-term effect of the settlement may have been to render Hyundai Motor Company, already disadvantaged relative to international competitors because of its low rates of labor productivity, even less able to resolve its difficulties in the long run.

The Hyundai-Kia deal may have saved Korea from the ignominy of having one of its major groups come under foreign control. But the deal called into question a number of policies of the Kim Dae-jung administration, notably its commitment to being open to foreign direct investment, its commitment to transparency, and its commitment to getting the government out of the financial intermediation business (again, all of these were goals that Kim had set forth in his own 1996 book). Moreover, the deal was to prove to be one of several events that would push Hyundai to the brink of disaster, a story to which we shall return. Furthermore, the deal gave Hyundai a 95 percent share in the Korean truck market and more than a two-thirds share of the domestic auto market, undermining the government's stated commitment to increase effective competition in markets in Korea.

One possible reason why Hyundai received what amounted to favors from the government throughout 1998 and 1999 (albeit "favors" that were to have the cumulative effect of bringing the Hyundai group to the edge of complete collapse) was that Hyundai's chairman, Chung Ju-yung, strongly supported Kim Dae-jung's "sunshine policy" meant to ease tensions with North Korea (Noland 2000).[15] In particular, Chung reached an agreement in 1998 with the North Korean government by which Hyundai would undertake a number of projects in North Korea, most notably the development of a major tourist site (Mount Kumgang) to which tourists from South Korea would be transported on cruise ships operated by the Hyundai group (for descriptions of these projects, see Flake 1999).[16] Kim Dae-jung strongly favored and encouraged these undertakings. Among other things, Chung committed the Hyundai group to pay North Korea at the outset about $150 million, an amount that would rise eventually to as much as $1 billion per year, for the right to manage Mount Kumgang and other projects. Such a sum struck many analysts at the time as excessive in light of the group's financial condition (e.g., Noland 2000).

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15. None of what follows should be interpreted as criticism of the sunshine policy per se. Although the subject is beyond the scope of this book, it does appear at the time of this writing that the sunshine policy has succeeded in some measure in reducing tension between North and South Korea. See Kim Sung-han (1999) for what amounts to a South Korean government perspective on the policy.

16. For detailed descriptions of Hyundai's efforts and the general state of relations between the North and South in 1998, see Kirk (1999, chapter 10).

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A series of other measures passed by the government in 1998 were oriented toward reforming the chaebol. These included a requirement that the five largest chaebol submit Capital Structure Improvement Plans (CSIPs) under which their debt-to-equity ratios were to be reduced to 200 percent by the end of 1999. To this end, the ceiling on the total stock that a bank could hold in a single firm was raised from 10 percent to 15 percent in the hope that this change would encourage debt-for-equity conversions. Means by which the groups might have achieved the goal, in addition to debt-for-equity conversions, included selling affiliates and raising new equity capital. Some groups in 2000 did take advantage of rising equity prices to raise new equity; but this was most often in the form of "preferred" shares, which could be sold without diluting the control held by existing shareholders (i.e., the founding families). Yet another means to achieve the goal was "creative accounting." One such approach was to issue corporate bonds to replace bank debt. Oh Gyutaeg and Rhee Chang-yong (2002) find that the total amount of corporate debt in Korea, counting corporate bonds, was virtually unchanged during the years following the crisis, as industrial firms simply replaced bank debt with other forms of debt. They suggest that as a result, Korean firms would remain vulnerable to external shocks, as the discussion of the final section of chapter 4 indicated.

Another government requirement—one in fact designed to circumvent problems associated with creative accounting—was that the top 30 chaebol prepare consolidated balance sheets and income statements that would conform to internationally recognized accounting principles and that would cover all affiliates, including financial and unlisted ones. These financial statements were to have been prepared by the end of fiscal year 1999. Citing difficulties in meeting this requirement, including a lack of qualified accountants in Korea, the chaebol pleaded for (and received) an extension of the deadline until the end of fiscal year 2000. Also, the groups were required to end cross-guarantees of debts by the end of 2000; as discussed in chapter 3, these were the guarantees by one affiliate of a group to pay back the debt of another affiliate should the latter be unable to do so on its own. They were often used to transfer part of the risks associated with new start-up ventures of the chaebol to better-established chaebol affiliates. As noted earlier, these arrangements were favored because majority equity holders in the new ventures (usually the chaebol founding families) could pass on part of the risk to minority shareholders of established affiliates but appropriate the returns from the start-ups, if there were any, for themselves. The guarantees were most often made without the consultation or approval of the minority shareholders.

At the end of 1999, after examining statements submitted by the five largest groups, the government announced that four of the five had in fact met the goal of reducing debt-to-equity ratios to 200 percent. (Daewoo alone did not meet the requirement, but by then Daewoo was bankrupt

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and in receivership.) Even then, it was clear that some creative accounting had been employed—most notably the upward revaluation of assets in order to bolster the reported value of equity (Haggard 2000) and equity swapping among subsidiaries (Beck 2000). Samsung met the requirement in part by reclassifying some long-term debt as debt currently due (the debt-to-equity ratio was calculated on the basis of debt with maturity of one year or more; short-term debt, viewed as financing working capital, was not included for purposes of calculating this ratio). Ira Lieberman (1999) estimates that without asset revaluation, the debt-to-equity ratio of Hyundai would have been close to 8.0.

These statements were not, however, the consolidated statements as required, but rather statements that excluded nonlisted subsidiaries. There were in fact many indications that the groups had not done much to reduce debt-to-equity ratios (both Hyundai and Daewoo had indeed significantly increased their debt—Hyundai in order to absorb Kia and the semiconductor operations of LG, and Daewoo to continue what amounted to a helter-skelter expansion program, described in the next section). And in April 1999 Kim Dae-jung had publicly expressed his frustrations over failure of the groups to take more meaningful steps to meet the debt-to-equity improvement goals such as selling assets or raising new equity capital.

Had such new capital been aggressively pursued, one might have expected that the shares of founders and their families in the total equity of the groups would have been reduced. However, Yoo Seong-min (1999) calculates that between the onset of crisis and the middle of 1999, the share of total equity held by the founders of the chaebol or their families actually increased. Nor was there much evidence of the selling of assets: although the five largest groups had reduced the number of affiliates from a total of 232 at the beginning of 1998 to 167 at the end of 1999, much of this apparent shrinkage had resulted from merging smaller affiliates into larger ones. Few affiliates were sold, and those that were sold tended to be small. Peter Beck (2000), for example, notes that about three-fourths of them employed 50 persons or fewer.

Moreover, the total assets of all of the big groups actually increased, both in absolute terms and as a percentage of total assets of all Korean corporations. According to the KFTC, the share of the top 4 chaebol in the assets of the 30 top groups increased from 38 percent in 1996 to 48 percent at the end of 1999; these figures included assets acquired by the top 4 from failed lower-tier groups (e.g., most significantly, Hyundai's acquisition of Kia), most often with government blessing. In March 2000, the FSC reported that the banks in Korea had advanced to the big four chaebol more than 40 trillion won in loans in excess of what was meant to have been legally permissible (Beck 2000).

In 1998 the case might have been made that new equity issues were impossible to market, given the depressed state of the Korean economy

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at large and the Korean stock market in particular. Indeed, the stock market crashed in 1998. But when in 1999 the market witnessed a sharp recovery, the chaebol still made no efforts to place major new common equity issues.[17] Rather, the evidence points to affiliates of the chaebol, in some cases offshore affiliates, buying back their own stock or the stock of affiliated firms in order to boost share prices, thus increasing the apparent value of equity (Mann 2000). During the run-up of the market there in fact appeared in the market new buyers dubbed "mutual funds." As Catherine Mann observes, mutual funds, at least in the United States, hold diversified portfolios of stocks. Their main function is to enable small investors to diversify their holdings of equity in order to reduce overall risk.[18] The Korean mutual funds, by contrast, seem to have held stocks only of one chaebol and in fact were managed by the chaebol. The holdings might actually have increased the risk to a holder of shares in the funds; in any case, there apparently was an effort to manipulate the stock market to the advantage of the chaebol. Mann notes that the stock price run-ups brought on by this effort were almost surely unsustainable, which would mean that small investors were vulnerable to being hurt. A longer-term victim likely would be the Korean stock market itself, which had never overcome the sullied reputation it gained during Roh Tae-woo's presidency. Moreover, the long-term development of Korea requires a well-functioning stock market, as will be argued further in chapter 6.

It is true, however, that foreign investors now hold about a third of the total value of shares listed on the Korean market, providing evidence that the market is not wholly unsound. But most foreign investment is concentrated in a relatively few firms regarded as "blue chip," such as POSCO (now largely privatized), Samsung Electronics, SK Telecoms, and so on. A better-functioning stock market might enable wider holding of Korean stocks by foreign shareholders, to the benefit of Korea.

Thus, when in August 2000 the consolidated statements of 16 chaebol were finally released, these showed that the debt-to-equity ratios of exactly

17. For a detailed analysis of stock and bond market behavior during the crisis and its aftermath in Korea, see Kim Sun-ho (2000).

18. According to financial theory pioneered by Harry Markowitz (1959), the risk associated with holding any security can be broken down into two components, one common to all securities (e.g., susceptibility to fluctuation in overall economic activity) and one specific to any given security. If the latter component is, on a security-by-security basis, statistically independent (i.e., one security's specific risk is not a function of the behavior of another security), then the statistical variance of a portfolio containing many securities will be less than that associated with a single security; in other words, diversification of holdings will reduce risk. The main barrier to such diversification by a small investor is lack of enough wealth to hold a sufficiently large number of securities to obtain the benefit of diversification. A mutual fund gets around this barrier by pooling the wealth of a number of such investors.

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Table 5.4 Debt-to-equity ratios of the five largest chaebol in Korea, 2000

	Claimed debt-to-equity ratio, 1999 (percent)	Actual debt-to-equity ratio, 2000 (percent)	Interest coverage ratio, 2000
Hyundai	1.52	2.96	0.91
Samsung	1.46	4.43	3.15
LG	1.48	3.58	1.42
SK	1.33	2.55	1.47
Ssangyong	6.34	17.74	0.28

Source: Beck (2000); compiled by Beck from the Korea Free Trade Commission and other sources.

none of the large groups in fact had met the goal (see Park Y. 2000b). Table 5.4 indicates what the true ratios were for what were now the top five groups. (Because Daewoo was in receivership, the fifth-largest group was now Ssangyong, which had not met the goal even in the largely fictionalized accounts on which the government's end-of-1999 statement had been based.)

Table 5.4 also shows 2000 interest coverage ratios for the five large groups, which the new financial statements made it possible to calculate accurately. With the exception of Samsung, these ratios showed the groups to be actually less healthy than the earlier estimated ratios reported above as calculated by Goldman Sachs and Company (see table 5.3). Moreover, we must keep in mind that the Goldman Sachs calculations were for a year of economic downturn, whereas 1999 had witnessed strong growth. SK and LG, by this measure, were now in the unhealthy range. Hyundai seemed to be no longer unhealthy but rather critically ill: the interest coverage ratio for Hyundai was less than one, indicating that the group was technically insolvent. The ratio for the new entrant into the top five, Ssangyong, was less than 0.3, indicating even more severe financial problems than Hyundai. Unfortunately, because earlier ratios were based on incomplete and perhaps inaccurate information, it is not possible to tell whether the apparent deterioration in the condition of the major groups was caused by actual worsening of their financial condition or by an upward bias in the earlier estimates.

Other problems emerged in the industrial sector of Korea in 1998. In July 1998, for example, the FSC identified 55 firms that it considered to be nonviable. Most of these were affiliates of the chaebol; included were affiliates of Hyundai, Samsung, LG, and SK, four of the top five groups. (Curiously, especially in light of the bankruptcy of the whole group one year later, no affiliate of Daewoo made this list.) All of the afflicted firms and groups were subject to various "workout" programs—that is, they

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were reorganized, sold, merged, given new capital injections, and in a relatively few cases slated for liquidation. Most of these firms were in fact rather small ones; collectively, they were not at the crux of the problems in the Korean industrial sector.

The Collapse of Daewoo

One might have thought that when the brief but severe recession ended in Korea, as happened in 1999, and growth swung from negative 8.8 percent to positive 10.9 percent, the industrial bankruptcies would also have ended. But, in early 1999 the most spectacular bankruptcy in Korean history—that of the Daewoo group—still lay ahead. When the financial crisis broke out in late 1997, Daewoo had been, depending on exactly which measure one used, the second-, third-, or fourth-largest group in Korea. As we have seen, the group had been founded only in 1968, and its growth rate during the 1970s and 1980s had been little short of phenomenal.

During its entire existence, the group had been led by its founder, Kim Woo-chung, an energetic, charismatic individual possessed of, by most accounts, a rather flamboyant and outsized ego. (Daewoo, in fact, means "Big Woo," where the "Woo" is the first portion of the chairman's first name.) By 1997, the business empire of Daewoo was huge by any measure except perhaps true net worth. It consisted of 30 subsidiaries, of which only 10 were listed. The high number of unlisted subsidiaries itself should have elicited concern, particularly given that some of these were large firms (e.g., Daewoo Motors). Most of these were under the control of Daewoo Corporation, which operated as a de facto holding company. The affiliates included six nonbank financial institutions. The industrial subsidiaries of Daewoo participated in 26 industries as per classification of industry by the Korean Standard Industrial Classification at the three-digit level. The group was one of Korea's largest outward foreign investors: Daewoo held operations in literally dozens of countries around the world, and the name "Daewoo" had come to be recognized internationally. By the end of 1999, however, the group was defunct and chairman Kim was a fugitive from justice. At the time of this writing, in fact, Kim's whereabouts are not known to Korean authorities. He has been reported in exile in the south of France, in Switzerland, in North Africa, in Kazakhstan, and elsewhere.

Perhaps more than any single entity, Daewoo embodied what went wrong in Korea during its period of rapid growth. Using debt financing, the group expanded recklessly into activities in which it earned very low rates of return on capital invested. It and its chairman persistently used accounting gimmicks, nonlisted subsidiaries, and outright lies to hide the true extent of its borrowings and the poor performance of many

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of its operations. Even so, it was transparently clear that in many if not most of the activities in which it participated, Daewoo was a "me-too" entry, in that some other Korean group had pioneered or emerged as industry leader in that activity. Thus, for example, in shipbuilding, Hyundai was first entrant while Samsung via acquisition developed into the number two firm, leaving Daewoo as a distant and chronically troubled number three. In automobiles, Daewoo was the third firm to enter on a large scale, following Kia and Hyundai; but in this case, during the 1990s, Daewoo did emerge somewhat stronger relative to its Korean competitors than in most other sectors. Indeed, after the group's failure, Daewoo Securities and the Daewoo Motor Company emerged as the assets of the group were sought by other firms as a takeover target. In electronics and related products, Daewoo was well behind Samsung, Hyundai, and LG. In no core business that it undertook was Daewoo ever the Korean leader, nor was it ever ranked among the best companies internationally.

In spite of a generally mediocre return on investment record, however, Daewoo never seemed to have much trouble obtaining the finance needed to expand. Most observers credit the ability of Kim Woo-chung to ingratiate himself with Korea's presidents beginning with Park Chung-hee and including, it would seem, Kim Dae-jung. During 1998, in fact, a year of severe recession in Korea, Daewoo managed to increase its reported debt by 40 percent, or a total of $17 trillion won (Beck 2000).[19] It is not entirely clear how this was possible, and it is not even clear exactly what was done with the proceeds of the debt; the group has never released a financial statement that would indicate fully the uses of its funds. What was clear in 1998 was that Kim Woo-chung had no intention of reducing the rate of expansion of the group by cutting back on investment in what were widely recognized as low-return undertakings. Early that year, he announced in an interview that Daewoo would ignore Korean government pleas for reform and would continue to borrow to the hilt to finance expansion.[20] The big question thus becomes, Why did lenders, both inside and outside Korea, continue to lend to Daewoo during that year?

One theory is that banks in Korea during 1998, bereft of investment opportunities, saw Daewoo (along with the other big five chaebol) as subject to the "too big to fail" doctrine. This explanation seems inadequate, however, given government pressures for the chaebol to reduce debts and Kim Woo-chung's defiant attitude. Even if such a doctrine

19. In 2002, a scandal erupted in Korea regarding illegal campaign contributions to Kim Dae-jung in 1997 routed through a foundation controlled by Kim's third son. It was rumored that contributions had been received from Daewoo or from Kim Woo-chung. At the time of this writing, such allegations have not been established as fact.

20. Michael Schuman, "Daewoo Group Takes Expansionist Tack amid Crisis," *The Wall Street Journal,* April 22, 1998, A17.

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was at work, Daewoo was the most likely candidate to be the exception. Also, much of Daewoo's borrowings were from foreign banks, and in 1998 it was not clear that foreign banks would be included in a rescue of Daewoo because it was too big to fail.

One standard explanation for the failure of financial markets to withhold funds from bad ventures points to informational asymmetry. Boiled down to its essence, this argument is that financial institutions lend because they do not know what is truly happening to the money they are lending; rather, they are acting on the basis of bad information and, indeed, are being misled by the borrower. But this explanation too seems inadequate: while Daewoo practiced something less than full disclosure (the total extent of the group's borrowings eventually proved to be significantly understated), Kim Woo-chung was quite open about his general strategy of borrow and expand. Moreover, his strategy was plainly reckless and should have been seen as such. In addition, that Daewoo was in deep trouble seems to have been well understood even before the onset of the crisis in 1997, and that the group was heading toward the rocks was widely acknowledged in 1998.

A third possibility is that even though financial institutions knew that the group's strategy was bad and that the group was in deep trouble, they believed—or perhaps hoped against hope—that the group could be turned around. If so, this would have been a misjudgment leading lenders to throw good money after bad. Moreover, it appears that foreign banks lent to Daewoo on terms more favorable even than those demanded by Korean banks. In particular, Korean banks typically demanded that loans to the group be collateralized, whereas most foreign loans were not collateralized. Exactly why this was so is not clear, or at least not to me.

Whatever the answer to this mystery, by December 1998 it was obvious that the group was in truly deep trouble, even though Kim Woo-chung vigorously denied it and indeed gave interviews at several times during 1998 both to claim that Daewoo was not in difficulty and to describe his ire at government efforts to rein him in.[21] Nonetheless, under duress, the group announced major restructuring plans in December, including an impending agreement on the terms of the big deal with Samsung by which Samsung would acquire Daewoo's electronics businesses in exchange for Daewoo taking over the fledgling Samsung Motors. Kim Woo-chung also suggested that once Daewoo had gained Samsung Motors, the group would reorganize its combined automotive operations into one subsidiary and sell a stake in it to General Motors. At that time, General Motors was mum about this possibility, but GM did later emerge as a

21. See, e.g., "Companies and Finance: Asia Pacific," *Financial Times,* November 24, 1998, in which Kim suggests that all affiliates of Daewoo were profitable with the exception of the recently acquired former automotive affiliate of Ssangyong.

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bidder for the automotive subsidiary of Daewoo after the group went bankrupt. By that time, however, Samsung Motors had been sold to the French auto firm Renault and the Japanese automaker Nissan, the latter by then itself under Renault's control.

The restructuring plans also had overtones of desperation. Kim Woo-chung announced that Daewoo was talking with Japanese firms about a possible sale of its shipbuilding subsidiary. This subsidiary was highly troubled, and any sale would almost certainly have been on terms unfavorable to Daewoo. Daewoo was also negotiating with an American group (Newbridge Capital, which was at that time also negotiating a takeover of Korea First Bank; see above) to sell its telecommunications affiliate, and Kim was attempting to make a deal with the Japanese firm Nippon Electrical Glass to take over Daewoo's electrical glass operation. However, none of these proposed sales would yield enough cash to turn around Daewoo's losses. By the end of 1998, Daewoo's creditors were finally realizing that the prospects for Daewoo were very bad indeed (Noland 2000).

During early 1999, when the economic prospects for Korea in general were brightening, the financial problems of Daewoo intensified. Credit-rating agencies downgraded Daewoo's debt (in April, the US bond rating agency Standard and Poor's gave Daewoo a rating of B-). On July 17, the chairman was forced to pledge his personal assets in order to secure a rollover of corporate bonds and paper by domestic Korean lenders. It was not clear that those assets were adequate to guarantee this debt, however. With some encouragement and, more important, guarantees from the government, the creditors—which included financial subsidiaries of Hyundai, Samsung, SK, and LG—nonetheless extended the credit on July 19. The government also asked that foreign creditors roll over Daewoo's debts, but offered no guarantees. Foreign banks complained that there was no collateral behind the debts and, moreover, that they were receiving nonequal treatment from the Korean government, which had guaranteed the domestic rollovers. The head of the FSC replied that Daewoo would sell foreign assets to retire debt owed to foreigners (Noland 2000).

Matters deteriorated further shortly thereafter when creditors rejected Kim Woo-chung's restructuring plan and the government allowed creditors to take control of the restructuring process after foreign banks threatened to call Daewoo's foreign loans.[22] Days later, however, the restructuring was turned back over to Kim Woo-chung, possibly in an effort to cut foreign bankers out of the restructuring. Early August saw a soap-operatic conflict develop between the FSC and foreign banks over the handling

22. A somewhat more detailed description of the events described in the following four paragraphs is provided by Noland (2000), from which the description here is derived with additional facts from Beck (2000), Kirk (1999), Graham (2000), and Haggard (2000).

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of Daewoo; one casualty was Hanvit Bank, which was forced to accept a large discount on an international placement of about $1 billion in bonds. Its losses sent a signal that there would be a price to pay if foreign banks were treated less favorably than domestic lenders in any disposition of Daewoo. The Korean stock market fell, and domestic sympathy for Daewoo was waning.

On August 11, creditors were allowed to sell off Daewoo's financial subsidiaries, without which the group could not meet its daily cash obligations; this act signaled the beginning of the end. In the days that followed, the breakup of Daewoo began, which ultimately left the flagship Daewoo Corporation with nothing except its automotive subsidiaries. In a speech delivered on August 15, the anniversary of Korea's liberation from Japan in 1945, Kim Dae-jung referred to the Daewoo crisis in calling for the restructuring of the Federation of Korean Industries (the industry association representing the chaebol, whose chairman had been Kim Woo-chung) and the breakup of the chaebol. (President Kim, however, soon retreated from the latter position.) In late August an agreement was reached whereby debt repayments of 12 Daewoo subsidiaries were suspended for three months in order to allow for an orderly workout procedure to be achieved; due diligence proceedings would be carried out by the FSC and findings reported.

In early November, creditors rejected restructuring plans for two of Daewoo's larger affiliates, prompting the resignation of Kim Woo-chung. At the same time, the due diligence investigation by the FSC found that Daewoo's total debt was not $49 billion, as had previously been reported, but rather $73 billion. The FSC also reported that the debts of Daewoo could not be resolved without some combination of public money and Daewoo's creditors taking "haircuts" (i.e., receiving less than face value for retirement of debts).

But would foreign and domestic creditors be treated the same in this resolution? During December, the Corporate Restructuring Coordination Committee of the FSC proposed a scheme whereby in principle each set of creditors would receive the same treatment but de facto foreign creditors would receive worse terms than domestic ones. The difference in treatment centered on foreign banks' heavy lending to the Daewoo Corporation, the headquarters of the group that for practical purposes had functioned as a holding company—loans that, as noted, were not collateralized. The domestic banks, by contrast, held relatively more loans to affiliates other than the Daewoo Corporation, which were mostly collateralized. The Daewoo Corporation had a particularly high debt-to-asset ratio, and thus the FSC proposed a higher discount for Daewoo Corporation debt than for affiliate debt.

But this proposal was undermined by a revelation on December 6, 1999, that the Daewoo Corporation had illegally channeled upwards of $8 billion to ailing affiliates; this disclosure forced Kim Woo-chung on

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the lam (he was, fortunately for him, in Europe at the time and hence out of reach of Korean authorities) and also opened up the possibility that criminal actions could be taken against Daewoo in Korea and elsewhere. With these possibilities in the background, in late January 2000 foreign creditors and the FSC mutually agreed to a 61 percent write-off of Daewoo debt, but the creditors received part of the payment in warrants that had some potential to appreciate in value if the fortunes of Daewoo Corporation were ever to turn around. In effect, the assets of Daewoo were nationalized.

The saga still was not over. As noted, the Daewoo crown jewel, albeit a rather small one, was the Daewoo Motor Company (DMC). In early 2000, the Korean government announced that this subsidiary was for sale. Two large US auto-making firms, General Motors and Ford, indicated an interest in DMC (General Motors had been co-owner of DMC less than 10 years before). There were also rumors that Hyundai might take over Daewoo in a deal similar to that by which it had already taken over Kia. Articles appeared in the Korean press contending that national interests argued for DMC remaining under Korean control; such control almost surely would mean that the firm would be merged with Hyundai. But this merger would have given Hyundai a virtual monopoly on passenger cars in Korea; moreover, the Hyundai group itself was facing mounting financial difficulties (see next section). In May, Hyundai announced that it would not seek to take over Daewoo, although rumors persisted that the government was attempting to find a means by which this takeover might happen.

After a protracted period of bidding, in June the Korean government announced that the winner was Ford, whose offer was in the range of $7 billion, contingent on completion of a due diligence report. General Motors had bid in the $4 billion range. But in September, the due diligence report indicated that DMC had liabilities in excess of those reported, especially in the overseas operations that it had added since it had parted ways with General Motors in 1992. In addition, Daewoo faced penalties from the government of India for failing to meet export quotas that had been imposed as part of Daewoo's entry into India. The Korean government indicated that in spite of these findings, it would not accept a reduced offer from Ford, and on September 15 Ford backed out of the deal.[23] The Korean stock index plummeted.

General Motors proved to be still interested in DMC, but not at the $4 billion price that had been offered in June 2000. In June 2001, General Motors was reported to be offering only about $1 billion for DMC; it had earlier also indicated that if it were to buy the firm, it would want to close an outmoded plant in Inchon unless public funds to keep the plant open

23. John Larkin, "For Sale, Again: The Collapse of Ford's Bid to Buy Daewoo Motors Will Slow Financial and Corporate Reform," *Far Eastern Economic Review*, September 28, 2000.

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were forthcoming.[24] DMC's workers responded by declaring that if the Inchon plant were closed by GM, they would make it "very difficult" for Daewoo cars to be sold in South Korea; DMC's labor union in fact sent a delegation to GM's annual meeting in the United States to demonstrate opposition to any takeover of DMC by GM. In the meantime, the Korea Development Bank, the main creditor of DMC, indicated that the Inchon facility would have to be included (and kept open) in any sale of the firm.[25]

On May 1, 2002, the acquisition of DMC by General Motors was finally announced after more than a year of negotiations. GM was to pay $400 million for a 67 percent stake in DMC; this represented only 10 percent of the price GM had originally offered to acquire the Korean auto firm. Reasons for the reduced price included not simply the additional debt uncovered under the due diligence proceedings but also the loss in value suffered by Daewoo while the negotiations were under way. Thus, for example, during early 2002, when other Korean auto firms were reporting markedly higher sales than a year earlier, DMC's total sales dropped. Indeed, by the time the buyout was completed, Daewoo had fallen behind Ssangyong to become the number three automaker in Korea, far behind Hyundai (including Kia) and with Renault-Samsung closing ranks.

As part of the deal with General Motors, Daewoo's creditors, led by Korea Development Bank, acquired a 33 percent share in Daewoo at a price of $197 million. On June 29, it was announced that a new firm, GM-Daewoo Auto and Technology, would be created in September 2002 to take over Daewoo Motors' assets. GM also announced that all Daewoo employees under the level of vice president would be hired by the new firm. In addition, the Suzuki Motor Company of Japan would be buying a 14.9 percent stake in this new firm for $89 million; this stake would be sold by GM and hence would reduce GM's holding in Daewoo. Furthermore, in the future, GM would sell a 10 percent stake to its Chinese joint venture, Shanghai GM. Daewoo's bus operations were not part of the original deal with GM, and on July 1, 2002, a memorandum of understanding was signed by which an agreement in principle was reached to enable Youngan Hat Company to take over the assets associated with the bus operations.

The Near Collapse and the De Facto Breakup of the Hyundai Group

On March 21, 2001, Chung Ju-yung, founder of the Hyundai group, died at age 85. Starting virtually from scratch, he had in his lifetime assembled

24. Agence France Presse wire report, reported on the *Financial Times* Web site, http://www.FT.com, June 27, 2001.

25. John Burton, "Union Protests at GM Plans for Daewoo," *Financial Times*, June 4, 2001.

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one of the largest business empires in the world, albeit with much help from Korea's public treasury. Late in life, he had placed much of the empire on the line in what amounted to an idealistic cause, an effort to help end the antagonistic and dangerous relationship between North Korea, where he had been born, and South Korea, where he had himself prospered (and, in doing so, without question helped to transform South Korea from quite a poor into quite a rich country). If Daewoo mostly represented much of what had gone wrong with Korea, Hyundai represented what had gone right as well as what had gone wrong. Hyundai was, of course, a much bigger group than Daewoo; and unlike Daewoo, Hyundai was a world leader, at least in size, in some of the many business in which it operated. In other businesses, Hyundai was far from being a world leader, and the huge variance in performance of the many affiliates that made up Hyundai was at the heart of the problems that the whole group was experiencing.

Indeed, in no small part because of the venture in the North, but for many other reasons as well, at the time of Chung's death the Hyundai group was on the verge of following Daewoo into failure. At the time of this writing, the ultimate fate of the remnants of the Hyundai group remains unresolved and cloudy.

One thing became clear following the death of Chung Ju-yung: the group would not continue to operate as one chaebol (see SaKong 2000-2001). Indeed, Chung Ju-yung himself launched a breakup of the group, for familial more than business or economic reasons: he wished to divvy up his empire among his three surviving legitimate sons. The sons could not agree among themselves how to share the wealth and power that would come their way when their father passed away. One son, Chung Mun-hoon, would assume control of the original firm, Hyundai Engineering and Construction Company, Hyundai Merchant Marine and Hyundai ASAN (which controlled the ventures in North Korea). His younger brother Chung Mun-joon would control Hyundai Heavy Industries. Hyundai Motor Company (HMC) and its acquired affiliate Kia (which was run as a quasi-independent unit) would go to the third brother, Chung Mun-koo, who reportedly did not get on with his siblings. Hyundai Electronics Industries would be spun off from the other units and an effort would be made to reduce this affiliate's debt and to raise new cash. Certain other affiliates would also be spun off.

Because of the complex cross-holdings among the Hyundai affiliates and the poor financial state of many if not most of them, the separation was to prove difficult. For example, Hyundai Merchant Marine, designated as part of Chung Mun-hoon's piece of the empire, was a major shareholder in Hyundai Heavy Industries (HHI), destined to be part of Chung Mun-joon's mini-empire. Thus, in June 2001, the former sold many (but not all) of its shares in the latter, and planned to sell the remainder in the indefinite future. One problem was that HHI shares were depressed;

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in June they in fact were selling below book value. One cause for their drop in value was the revelation that HHI had advanced financial aid totaling about $1.2 billion to the distressed Hyundai Electronics Industries and other Hyundai units. As usual, this financing had gone forward without the consent of minority shareholders; indeed, the financing had been advanced without HHI even informing these shareholders of the transaction.

At the same time, HHI itself was a shareholder in other Hyundai units. It held stakes, for example, in Hyundai Corporation (the trading affiliate), Korea Development Corporation, Hyundai Oilbank, and Hyundai ASAN. It held 50 percent of Hyundai Petrochemical, one of the most troubled of Hyundai's units and one that was meant to come under Chung Mun-joon's purview. In addition, HHI was guarantor for debt for Hyundai Engineering and Construction Company and Hyundai Merchant Marine; these, as noted, were to fall to Chung Mun-hoon. Under post-1997 laws forbidding cross-holdings among firms, many of these connections had to be severed under any circumstance. At the end of fiscal year 2001, HHI in fact was operating at an overall loss, even though its main businesses, its shipyards, held a net backlog of orders and were turning substantial operating profits. The losses derived from its ties to other Hyundai affiliates, especially the petrochemical affiliate. Another major shareholder of this last affiliate—Hyundai Engineering and Construction Company, the flagship inherited by Chung Mun-hoon—was itself highly troubled. As already noted, then, HHI and other Hyundai units were beset with exactly the sort of problem that had come to plague most of the chaebol: bad operations had the potential to bankrupt good ones.

Thus, as spring turned into summer in 2001, the question in Seoul was: Could any of the Hyundai units survive as viable units once the separation occurred? As recently as early 2000, few financial analysts would have predicted disaster for the Hyundai group, though problems were known to exist. But as 2000 progressed—and, again, we should recall that this was a year of overall quite robust growth for Korea—the true scale of the problems began to surface. Although it seemed that these were everywhere (in large part because the cross-holdings of the group caused difficulties in one affiliate to affect the performance of other affiliates), two problems stood out as especially severe. One of these was the North Korean venture (or, rather, ventures), where payments pledged to the North Korean government were exceeding the ventures' revenues, let alone operating profits. The other was the combined semiconductor operation that had been created from the "big deal" with LG.

Hyundai Electronics Industries, as noted earlier, emerged from that deal as the world's largest producer of memory devices, displacing its Korean rival Samsung Electronics. But the operation also left HEI drowning in debt: when the merger with LG was completed in late 1999, HEI held a total debt of close to $10 billion. Not all of the debt, as was

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subsequently revealed, had been used to finance the business of the electronics firm; rather, HEI also invested in Hyundai Investment Trust, which was in turn pouring money into Daewoo. This investment was made despite HEI's own need for substantial capital investment to upgrade its production equipment; rather, debt servicing charges and the payments to HIT prevented HEI from making the needed investment in its own operations. At the time of the merger, both Hyundai and LG were losing money; but because the market for DRAMs was beginning to go into an up-cycle, in 2000 the combined firm was able to earn substantial operating profits. Then, in 2001 the bottom fell out of the DRAM market, and the firm lost close to a half billion dollars

In 2001 HEI became Hynix as Chung Mun-hoon announced plans to sell off his own shares and shares held by other Hyundai affiliates in the firm, so that the firm would cease to be part of the Hyundai group. In anticipation of this sale, these shares were placed on deposit at the Korea Exchange Bank. Hynix also announced that it would no longer be liable for any payment guarantees to other Hyundai affiliates. Thus, by June 2001 Hynix, the former HEI, was virtually an independent firm. But its problems were legion.

In June 2001, the firm raised more than $1.25 billion in an international sale of a "global depository receipt" (GDR) issue, which was required by Korean creditors in order to roll over about $4.4 billion in debts. The GDRs were sold to foreign investors, giving these rights to Hynix common stock at a discount of about 25 percent of the then-current market price. The firm announced restructuring plans, which included laying off excess workers as well as investing in new production equipment; however, apparently little action has been taken along these lines. Throughout 2001, in what has become one of the most controversial episodes of Hynix's checkered history, the Korea Development Bank underwrote a total of almost 3 trillion won of Hynix bonds. Several objections have been raised to this move, including threats by both the United States and the European Union to launch World Trade Organization complaints that the underwriting amounted to a subsidy to Hynix that is inconsistent with Korean WTO obligations. In October 2001, Hynix's creditors converted about 3 trillion won of debt into equity, agreeing in exchange to write off another 1.4 trillion won of debt.

Reports have emerged of alleged agreements whereby other former Hyundai-affiliated firms have agreed to help Hynix—for example, by buying semiconductor chips from Hynix at above-market prices. They raise suspicions that Hynix (and the whole former Hyundai chaebol) might be engaging in sub-rosa transactions that in effect continue the intragroup subsidization practices of the past, albeit in a somewhat altered form (Mako 2002a).

Whether in gaining its independence (if indeed it has become truly independent) Hynix had become so weakened that its survival was threatened

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was another matter; only time would tell. The big issue in 2001 was the price of DRAMs, which had fallen in mid-2001 to a price barely 10 percent that of one year earlier. Some analysts were predicting that without some recovery in DRAM prices, Hynix would almost surely fail.[26] Even with higher DRAM prices, the firm faced difficulties because it had failed to make capital investments between 1998 and 2001. During 2002, Hynix continued to teeter on the edge of bankruptcy and only the infusion of new capital by its creditors was keeping it afloat. In the spring of 2002, Hynix announced an operating loss of more than 84 trillion won ($7 billion) for FY 2001, the largest in the history of a Korean firm. Indeed, the magnitude of this loss was equal to more than 40 percent of the combined earnings of those Korean companies that reported profits. By early May, the market value of the firm had tumbled to 60 percent of its level of December 31, 2001.

On April 22, 2002, Hynix management announced that it had signed a memorandum of understanding (MOU) with the US firm Micron Technology whereby Hynix would sell its memory chip operations to Micron for $3.4 billion, on condition that these operations be infused with $1.5 billion of new cash. Tied to the MOU was a debt-rescheduling plan that would, in effect, require more than half of Hynix's debt to be written off by the firm's creditors. This would be a large hit on the creditors, as Hynix accounted for more than 20 percent of all corporate debt outstanding in Korea. Under this MOU, Micron would also assume a 15 percent stake in the remaining operations of Hynix for $200 million. The MOU was subject to approval by the boards of directors of Hynix and Micron, as well as the council of creditors of Hynix.

Almost immediately, on April 25, Hynix's labor union, with the backing of the Federation of Korean Labor Unions, adopted a resolution opposing the MOU and any sale of Hynix assets to Micron. The union proposed that Hynix instead "stand on its own feet," threatening to go on strike if the terms of the MOU were accepted by the Hynix board and creditors' council. However, on April 26 the chairman of the FSC, Lee Keung-young, urged the creditors' council to accept the terms of the MOU on the grounds that Hynix would likely fail entirely without the sale of assets to Micron. But some creditors expressed doubts about the sale, objecting to the large losses they would take if it were to go through. The creditors opposing the MOU were largely nonbank institutions, while the main banks (led by Woori, the new financial conglomerate centered around what had been the Hanvit Bank) generally were inclined to accept the proposed deal, fearing that loans to Hynix might otherwise be 100 percent nonrecoverable. Representatives of minority shareholders of Hynix also vocally opposed the deal.

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26. See "When the Chips Are Down," *Far Eastern Economic Review*, July 19, 2001.

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In what was something of a surprise vote, the Hynix board of directors rejected the MOU on May 1, 2002. Instead of the terms proposed under the memorandum, the board suggested that Hynix sell off its nonmemory chip operations and continue as an independent firm making memory chips only. Outside analysts, including those associated with Hynix's creditors, almost immediately questioned whether this scheme was feasible.[27] Following the vote, the share price of Hynix rose 6.1 percent, but the share prices of major creditors fell by as much as 8 percent. Micron on May 4 announced that it was "withdrawing" from the negotiations with Hynix; an official of the Korea Exchange Bank, the largest single creditor to Hynix, suggested that Micron might be open to restarting the negotiations in the future—but not in the near future. On May 9, the Hynix board of directors approved a plan whereby the firm would be broken into four different operations, three of which would be sold: chips other than memory, thin film liquid crystal displays, and other operations. By dividing the nonmemory operations into these three parts, Hynix management implicitly acknowledged that only one (thin film liquid crystal displays) was really viable; in particular, management explicitly acknowledged that the nonmemory chip operation was "a bit outdated." This plan was commented on favorably by FSC head Lee Keung-young on the day that it was announced.

During this period, there was considerable turnover in Hynix management, with the CEO being replaced in early May and 30 percent of all executives being laid off later that month in a bid to reduce costs and make management more effective. Hynix shares rose 13 percent over the month. In spite of these efforts, after the publication of due diligence reports prepared as part of the effort to break the firm into four parts as described above, FSC head Lee Keung-young announced on May 23 that even the core memory business would not be viable as an independent company and would have to be sold. Also, Lee hinted that further bailouts of the firm would not be forthcoming. During early June, creditors converted large amounts of convertible bonds into equity, giving them a large majority stake in Hynix's voting shares; some of these creditors also announced the creation of additional reserves against write-downs of remaining Hynix debt (e.g., the Woori group raised its reserves from 70 percent to 80 percent of Hynix debt held by the group). A minority shareholders' effort to gain a court injunction to prevent the conversions was rejected by the Seoul District Court on May 31.

During the second week of June, creditors began selling Hynix shares on the open market, precipitating a 15 percent drop in share prices. In early July, Woo Eui-je, an executive of the Korea Exchange Bank, became CEO of Hynix, and a new board of directors was selected. This

27. See "Hynix Seeking to Sell Off Nonmemory Unit for Survival as Memory Manufacturer," *The Korea Herald,* May 2, 2002.

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board of directors was endorsed at an extraordinary meeting of shareholders on July 24, 2002.

On July 8, 2002, Micron publicly announced that it might still be interested in taking over the memory chip operations of Hynix. But at the time that this book was going to press, no new negotiations had begun. Only time will tell whether a deal might be struck and, if so, whether Hynix will suffer the same fate as Daewoo Motor Company—to be eventually sold for a sum far less than that originally offered but initially rejected.

Other former Hyundai businesses were also doing poorly. The losses on the North Korean ventures (Hyundai ASAN and Hyundai Merchant Marine) were clearly unsustainable. In February 2000, the accumulated losses of ASAN had exceeded its paid-in capital, and the firm unilaterally decided to halve the $12 million per month it had agreed to pay the North Korean government for the right to run the Mount Kumgang project. Hyundai had expected half a million tourists to visit that destination per year, but in the first two years of operation, fewer than 400,000 had actually come. Hyundai Engineering and Construction Company was contracted to build most of the facilities at Mount Kumgang (a large spa hotel, golf course, restaurants, etc.) as well as the necessary infrastructure. Hyundai Merchant Marine, which was the major shareholder of ASAN, was losing money on its passenger ship service to the project. In addition to Mount Kumgang, Hyundai had committed to a $5 billion industrial complex in North Korea near the town of Kaesong. In June 2001 the future of this project was in question.

In April 2001 Hyundai Merchant Marine, at the insistence of creditors, ended its passenger ship service to Mount Kumgang and handed over all operating responsibility to ASAN, which in turn negotiated an overland route to the project by which tourists could travel. In June, the South Korean government agreed to subsidize the undertaking through the Korea National Tourism Agency (KNTO). KNTO would provide up to $12 million a year to underwrite marketing expenses and also to pay the transportation costs of tourists going to the area. In return, it would receive the concessions to manage the duty-free shops and hotels at the site. There were rumors that the South Korean government had pressured Hyundai Motor Company to extend assistance to its sister companies involved in the North, but that Chung Mun-koo had refused on the grounds that such assistance could undermine the relatively good health of HMC (see below).

Losses in North Korea also affected Hyundai Engineering and Construction Company, which had its domestic problems as well, including a sharp downturn in its core construction business in South Korea. The finances of the former flagship company were complicated by its relationships with other Hyundai affiliates. HECC in November 2000 nearly defaulted on its debt, but agreement was reached with creditors on a rollover of bank credits that would last through the end of the year. This

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raised concerns about a possible bailout of HECC (Mako 2002a), because of the role of government in obtaining the agreement. Furthermore, during 2000 reports circulated that the FSC had pressured other Hyundai affiliates not to resist HECC's plans for a "self-rescue" (translation: other affiliates would come to HECC's aid). In January 2001 Chung Mun-hoon barely averted loss of control of the firm to creditors, but in June 2001 a consortium of these creditors, led by the Korea Exchange Bank, agreed to a massive debt-for-equity swap arrangement in exchange for a rollover of debt. This arrangement, carried out in 2002, effectively removed Chung Mun-hoon as the main shareholder of the firm; as a result, the former flagship was no longer in the hands of the founding family of Hyundai. The main shareholder became the Korea Exchange Bank, which is under government control. The firm in 2001 posted large losses, and its status at the time of this writing remains very unhealthy.

In 2002, in fact, the only one of the Chung brothers with much reason to smile was Chung Mun-koo. Somewhat remarkably in the eyes of many analysts, and in spite of the gloomy prognosis offered earlier in this chapter, both Hyundai Motor Company and its Kia affiliate were earning positive returns. This profitability was in good measure the result of upturns in their fortunes in the United States, where both the Hyundai and Kia brand names were selling reasonably well in spite of continuing quality and image problems. The turnaround there seems to have resulted from the aggressive pricing of popular models. In particular, Hyundai's Santa Fe sport utility vehicle and its relatively low-priced Sonata luxury sedan were both selling well, raising expectations that Hyundai would surpass its previous high point in unit sales in the United States, set in 1991.

One consequence of Hyundai Motor Company's improved fortunes in 2001 was a significant rise in its common stock price during the first half of the year. This might have reflected not just improved sales but also market perceptions that HMC was no longer tied to the Hyundai group.[28]

In the first quarter of 2002, however, exports of both Hyundai and Kia vehicles fell by a combined total of more than 6 percent, apparently because of a slowdown in the US economy. Largely offsetting this drop, domestic sales of cars in Korea picked up, so that total unit sales of the two Hyundai auto firms remained about constant. Even so, Kia's net profits fell about 14 percent in the first quarter. And while the Hyundai Motor Company's operating profit rose in that quarter, operating margin per vehicle sold fell in 2002 relative to 2001, an indication of the aggressive pricing strategy that Hyundai was following.

In the long run, however, it is unlikely that Hyundai Motor Company can become a major world producer of automobiles. Indeed, most forward-looking analysis of this sector suggests that the world industry will become increasingly dominated by a handful of firms, maybe as few as six

28. See "Hyundai Motor Group's Market Value up 76%," *The Korea Herald*, June 30, 2001.

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but no more than eight. No analyst believes that Hyundai will be one of them. For this reason, perhaps, in September Daimler-Chrysler announced that it was purchasing a 9 percent stake in HMC. Because Daimler-Chrysler also held a position in Japan's Mitsubishi Motor Company (MMC) and because MMC had long held a small position in HMC (HMC, it might be recalled, originally produced vehicles of Mitsubishi design), Daimler-Chrysler's total holdings in HMC were about 12 percent. In June 2001 it was announced that a joint venture would be set up with HMC in Korea to manufacture engines for commercial vehicles. Nonetheless, perhaps to stave off nationalistic feelings such as those that were impeding efforts by the Korean government to sell Daewoo Motors to foreign investors (see the previous section), HMC executives indicated that HMC would never come under the full control of Daimler-Chrysler. Again, time will tell.

In the meantime, HMC, like other components of the disintegrating Hyundai empire, suffers from high debt (HMC in particular inherited the debt incurred to acquire Kia). Also, the problem of low labor productivity persists at HMC, as its factories remain overstaffed. Its unions remain intransigent on the question of any reductions in its workforce.

Thus, at the time of this writing, the Hyundai empire was in an advanced state of dismemberment. I argue in the next chapter that the de facto splitting up of Hyundai is almost surely to the good, as the group had become very dysfunctional. But the main issue now is whether the new units can survive, let alone prosper. This question, too, can be answered only in the future.

Will 1999 Be Remembered as a Repeat of 1990?

In an article published in 1999, You Jong-keun (1999), then governor of South Cholla province in Korea and an economic advisor to President Kim Dae-jung, admitted that during 1998 Kim had decided to place greater priority on bringing the Korean economy out of the deep recession it had fallen into than on achieving the structural and corporate reform that he and his advisors understood were necessary for the long-term health of the economy. However, You also indicated that the need for reform was understood, noting that reform of the top five chaebol was particularly important. In his words: "The success or failure of chaebol restructuring will determine the direction of Korea's paradigm shift" (You 1999, 18).

But as the year 2002 neared its midpoint, and this book was nearing completion, the job of corporate reform clearly remained unfinished. Indeed, by some measures the task seems more daunting today than it did in 1998. In 1998, one might recall, numerous firms were identified as nonviable and put into corporate workouts. But most of these firms—as

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well as other firms that are technically bankrupt, such as certain affiliates of Daewoo—are in fact still operating, in most cases by virtue of continuing loans that are little more than operating subsidies to cover the difference between operating revenues and operating costs (Noland 2001). Continuance of the status quo is expensive, particularly in terms of opportunity cost: because national savings are being expended to support loss-making operations, those same savings are not available to finance new investment in activities that could propel Korea out of the mire in which it is, for the moment, trapped. Many analysts thus now see a parallel between Kim Dae-jung's priorities of 1998 and those of Roh Tae-woo in 1990. In both instances, short-term growth was sought at the expense of needed long-term change. The growth in 1990 and ensuing years was a precursor to the calamity of 1997-98, and some Korean pessimists worry that the growth of 1999-2002 could be the precursor to a second calamity.

At the same time, there are major differences in the two periods. Unlike in 1990, the easing of monetary policy in 1999 did not lead to rising inflation; and this time there has not been a surge of expansion of capacity in industries already suffering from overcapacity (no new shipyards, no attempted entries into automobile production, etc.). Rather, the main problem now is what has failed to happen: closure of obsolete plants, reduction of workers in operations where there is clear excess of labor, and reduction of debt.

The main consequence is that Korea, in spite of reasonably strong macroeconomic performance in 2002, is failing to fully realize the potential that it clearly enjoys. Korea in fact remains a country with tremendous potential: the country possesses superb technology, an industrious and well-educated people, and, for all their woes, some of the world's best industrial companies, including chaebol-affiliated firms such as Samsung Electronics, SK Telecoms, and others.

So, where to go from here? This is the topic of the next and final chapter.

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