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The Miracle with a Dark Side: The Chun and Roh Years, 1980-92

Chun Doo-hwan Takes Over

Following the assassination of Park and a short interim of power struggles within Korea, the country came under the leadership of two more military generals: first Chun Doo-hwan (1980-87) and next Roh Tae-woo (1987-92). Chun was self-appointed, as Park himself initially had been. Roh was elected but his presidency is nonetheless generally seen as essentially a continuation of military rule. During the almost 12 years in which these two generals held power, the Korean economy generally prospered, albeit with some hiccups that turned into coughs during Roh's last years. These were also years in which the large chaebol continued, by and large, to grow and, in some cases at least, to prosper. Much in Korea thus went right during this time, and the period ended with a restoration of democracy. Nonetheless, the two generals to this day are generally reviled rather than revered in Korea. To understand why, it is necessary to understand the circumstances under which they came to power.

When he was assassinated in October 1979, Park Chung-hee had done nothing to prepare Korea for a change of leadership. He had named no successor and established no method of choosing one in the event that he should be unable to carry out his functions as head of state, beyond a provision that made the prime minister acting president if he were incapacitated. When he was assassinated, after all, Park was president of Korea for life, and his clear intention was to keep living and ruling for a very long time.

But at the time of the assassination, there was widespread discontent in Korea that had both economic and political overtones; indeed, as explained in the previous chapter, it indirectly led to the assassination. Popular dissatisfaction was to erupt in large demonstrations in the months that followed Park's death, and these were used in turn as an excuse for a military crackdown and the continuation of military rule.

The military took power despite the presence in Korea of individuals who enjoyed widespread support and were prepared to lead the country. During the last years of Park's rule new figures arose (or perhaps more accurately, were reinvented) who served as leaders of a de facto opposition to Park that existed in spite of the oppressive nature of the Yushin regime. Three persons in particular had emerged, any one of whom might have become president had free and open elections been held in Korea. All had the family name "Kim," and hence they were collectively known as "the three Kims."

All three have already been mentioned. The first, Kim Jong-pil, had as a young officer led the coup that ultimately resulted in Park becoming head of state; he subsequently served as prime minister and first head of the Korean Central Intelligence Agency in the early Park years. He later had a major falling-out with Park. Although he went public with his complaints, he stayed within the government party. But in 1979, as leader of the party, he probably destroyed his chances for becoming Park's successor by playing his hand too early. Because he saw himself as the only one of the three Kims who might be acceptable to the military as president, he attempted to get himself named as interim president in the immediate aftermath of the assassination. However, it soon became clear that he in fact had very little support from within the military, and his bid failed.

The second Kim, Kim Young-sam, was the advocate of democracy whom Park had thrown out of the National Assembly in early 1979. At that time, he had been the leader of the opposition party in the Assembly that Park had tolerated, if just barely. Kim Young-sam was in fact generally seen as a moderate and his rather weak opposition to Park may explain why his party had been allowed to exist under the Yushin regime. In 1979, perhaps because of his moderation but certainly also because he had been recently singled out for abuse by Park, he quite possibly enjoyed the most widespread popularity of the three Kims.

The third was Kim Dae-jung, the opposition leader who had run against Park in 1967 and 1971, nearly winning in his second attempt, and whose 1973 abduction from a Tokyo hotel by Korean security agents had triggered a storm of international disapproval (which almost surely saved his life). As noted in chapter 2, Kim had been subsequently imprisoned but then released in 1978 in a move designed by Park Chung-hee to convince US President Jimmy Carter that Korea was making progress on issues of human rights. Kim's main constituency was in his home province, economically backward South Cholla, where discontent with the Park government was the highest anywhere in Korea. People in this province tended to believe that they were distinct from other Koreans (Cholla had been a separate kingdom before Silla, the first unified Korean kingdom, was created), and they also believed that the relative underdevelopment of their province was the result of deliberate policies by the Park government to keep them down. Their suspicions had some justification (Jones and SaKong 1980; see also Wickham 1999). During the HCI drive, Park had clearly favored locating new industrial complexes in the southeastern areas of Korea and especially in Kyongsang province, the area of his birth. Few activities were located in the southwest region that encompassed the two Cholla provinces, even though one explicit objective of the HCI drive was to locate heavy industry, seen by Park as vital to Korea's defense, as far from the North Korean border as possible. Cholla is in fact as far as Kyongsang from the border.

Thus, in 1979, Kim Dae-jung and Kim Young-sam were increasingly rivals claiming the leadership of the opposition. Both would, in the future, become president of Korea (Kim Young-sam was president at the time of the onset of the financial crisis, and Kim Dae-jung is president at the time of this writing). But both of them in 1979 were deeply distrusted by the Korean military. The events following the assassination of Park were a product of this distrust; in retrospect, it is clear that the leaders of Korea's army simply did not wish either of these two Kims to become head of state, and the army had the power to enforce its wish.

The prime minister of South Korea under Park at the time of his death, Choi Kyu-ha, became acting president as per the Yushin constitution. One of Choi's first moves, after proclaiming martial law, was to name Major General Chun Doo-hwan of the Korean army as chief investigator to learn the full truth of Park's assassination.

Almost immediately after the assassination, the US government issued a warning to the government of North Korea not to try in any way to take advantage of the lack of a leader in Seoul. In the weeks that followed, US naval forces were dispatched to the area, and US-staffed air defenses in South Korea were bolstered.[1]

Also in the weeks that followed the assassination, a group of officers of the South Korean military plotted to take control of the army away from chief of staff General Chung Sung-hwa, using as pretexts a supposed threat from the North and an alleged complicity of Chung in the assassination of Park, in which at least some of the plotters saw the hand of North Korea despite the lack of any evidence whatsoever. They subsequently took action in what is now commonly referred to as the "12/12 Incident." Under the command of General Roh Tae-woo (the future president), units

1. As noted by both Wickham (1999) and Gleysteen (1999), there was in fact no imminent threat posed by North Korea; the US actions were purely precautionary.

of the South Korean army known to be loyal to the group were moved into Seoul on December 12 to arrest Chung and to give effective command of the South Korean army to the plotters. Their leader was Chun Doo-hwan, the person who had been put in charge of investigation of the assassination and who then became chief of staff of the army in place of Chung (and thus administrator of martial law in Korea).

Following the 12/12 Incident, for several months there was relative quiet in Korea; but during the spring of 1980 a new round of student protests and workers' strikes erupted. Both Kim Young-sam and Kim Dae-jung figured in these actions. There is little evidence that they actually fomented them and, indeed, both urged calm on the part of the agitators. But because they were leaders of the opposition, the strikers and protesters looked to them for leadership. For his part, General Chun tended to see the protests and strikes as the product of hidden actions by North Korea (Wickham 1999).

In mid-April, in what surely ranks as one of the most ill-considered actions imaginable, President Choi named Chun as acting head of the KCIA in addition to his position as acting chief of staff of the army. The groundswell of negative popular reaction rose swiftly. Kim Young-sam, at a press conference held on May 9, called for an end to martial law and for power to be turned over to an elected government under a new constitution that had been hastily drafted in the National Assembly following the assassination of Park. Matters reached a head later that month.

First, students and other protesters clashed with police in Seoul and elsewhere. On May 17 a major crackdown was initiated, over US objections, following the killing of a policeman in Seoul. At Chung's instigation, President Choi issued a new emergency martial law decree: it enabled the arrest of student leaders, the detention of all three Kims, the shutdown of university campuses, and the indefinite postponement of a meeting of the National Assembly scheduled for May 20. Furthermore, it became clear that President Choi under the new decree was effectively stripped of almost all power as head of state, which reverted to the military.

In Kwangju—the main city of South Cholla province, which had historically been the region's capital—protesters refused to heed the decree and end their protest. On May 18 students from Chonnam and Chosun Universities, both located in Kwangju, staged a large-scale but peaceful demonstration, which was broken up forcefully by riot police. Members of Korea's Special Warfare Command—an elite army unit trained to fight North Korean commandos—then entered the city and sought out any young people who looked like students in order to beat them up. In some cases, however, soldiers actually bayoneted their victims.

Citizens reacted by storming government buildings and seizing firearms and ammunition. The army units withdrew to a perimeter around the city. The military issued a statement blaming Kim Dae-jung for the insurrection in Kwangju, though at the time the insurrection began he was in detention. On May 27, after talks between the government and leaders of the insurrection broke down, upwards of six thousand army troops entered Kwangju and secured the city; in the process, about 200 people were killed.

In August, Kim Dae-jung was put on trial by the Chun government and found guilty of fomenting the unrest in Kwangju. He was then sentenced to death. International outcry was immediate, including from the United States. President Carter in December 1980 sent Secretary of Defense Harold Brown to Seoul to plea for clemency for Kim, to no avail. But Richard Allen, an advisor to US president-elect Ronald Reagan, sent word to Chun that the American reaction to the execution of Kim Dae-jung would be "like a lightning bolt from heaven striking you" (Gleysteen 1999). In a deal struck in December 1982, Kim agreed to go into exile in the United States; there, while a visiting fellow at Harvard University, he wrote a book titled *Mass Participatory Economy: Korea's Road to World Economic Power* (1996). He returned to Korea in 1985 in order to run for the National Assembly. It was reported that Chun was reluctant to allow Kim to enter the country but, in the end, nothing was done to stop him.

More than ten years later, in 1996, Chun was tried and convicted for complicity in the murder of the 200 or so citizens who died during the suppression of the Kwangju insurrection. His death sentence was commuted to life in prison on appeal in December 1996, and he was pardoned in December 1997 by President Kim Young-sam after consulting with Kim Dae-jung who had just won election as Korea's next president.

But those events lay in the future: in early 1981, Chun became head of state of Korea. At the time, the Korean economy was going through its worst period since the 1950s; indeed, for the first time in many years, in 1980 growth turned sharply negative. Thus, Chun's urgent task was to restore economic health to Korea. A first priority was to tackle inflation. Excessive growth of money supply—caused by policy loans to chaebol during the HCI drive, where the real interest rates on these loans were often negative, and remittances from construction projects in the Middle East that were not sterilized by the central bank—had caused inflation to surge. The excesses of the HCI drive had also led to a serious structural problem of imbalance of supply and demand. As a consequence, some sectors had so much excess capacity that the market for the relevant product could not clear at any price that yielded positive returns on the capital employed by suppliers operating in that sector. The situation was especially dire in the chemicals sector, where capacity had been added in anticipation of rising exports that failed to materialize because Korean firms were not competitive. In contrast, in other sectors there was excess demand, but because the government in effect rationed all bank credit to favored projects and firms, no financing was available to fund expanded supply to meet this demand. Also, import restrictions often prevented the inflow of imports that could have alleviated the imbalance. As might be expected, relative prices of goods for which excess demand existed rose. In addition, the Korean economy had to absorb the second oil shock in 1979. And, of course, the protests and strikes of 1980 had resulted in much lost output—though the economic consequences of this turmoil were probably the last thing on the minds of either the protestors or the government authorities at the time.

Economic Reform under Chun

Chun Doo-hwan fully recognized that getting the Korean economy on a better footing was one of his most pressing tasks as president. To accomplish this, he took a leaf from the book of Park Chung-hee and appointed a superb group of well-trained economists to advise him. It was headed by Kim Jae-ik, who first served as director general of the planning board of the EPB and later as secretary for economic affairs in the Blue House (the presidential residence). Noting that economic stabilization measures (fiscal and monetary restraint) that had been implemented in April 1979 by the Park government had had little success, the group advised additional stabilization measures. In addition, it recommended long-term structural adjustment and reform, including liberalization of the import regime. During 1981, interest rates were cut in an effort to stimulate the economy; at the same time, at Kim Jae-ik's urging, Chun attempted to jawbone Korean industry not to raise prices and labor leaders not to press for wage increases. Also, special tax breaks were enacted to benefit those HCI industries in the most difficulty. In 1982 these tax breaks were rescinded as part of a package that lowered overall corporate tax rates.

Over the next year or two, Chun's measures, as recommended by Kim Jae-ik and his team, met with considerable success. GDP growth resumed in 1981, albeit at an initial rate that was anemic by the standards of the Park years. But then, in 1982 and following years, real growth rates rose back to "miracle economy" levels. Growth made it possible to grant real wage increases in 1982, offsetting the real wage declines of 1980 and 1981 (see table 2.3).

Ironically, after taking power in what had amounted to a coup d'état, Chun promoted his government as one of "social justice." By this, he seemed to mean "economic justice." He hoped to reduce the economic inequities that had arisen in Korea, which were at the root of much of the nation's popular discontent. However, at the end of the day, little was actually done. Thus, in December 1980, before Chun officially assumed power but with his approval, an antitrust law went into effect, called in English the Monopoly Regulation and Fair Trade Act but commonly known as the Korean Antitrust Act or KAA (Chang 1996). To implement it, a new regulatory agency, the Korea Fair Trade Commission or KFTC, was created. The law was amended in 1986 to toughen the provisions pertaining to economic concentration, a move that was clearly aimed at the chaebol. The law contained the normal provisions of antimonopoly laws, addressing cartels and cartel-like behavior (e.g., collaborative acts among sellers to fix prices, restricting output or shipments, or allocating territories among sellers), mergers, and abuse of a dominant market position by a seller. The last provision, modeled more after European than US law, was directly itself aimed at chaebol: under the law, monopoly was not per se illegal; but in markets in which one company (or more) was deemed to hold a dominant position, certain practices were labeled abusive and subject to sanction.

Under the new law, a dominant position was deemed to exist if either (a) one firm held more than 50 percent of the market or (b) the combined share of the top three firms was greater than 75 percent, where the market share of any firm holding less than 10 percent of the market was excluded from the calculation. In 1990, 135 markets in Korea were considered to be characterized by market dominance, and almost 80 percent of these were associated with the top 30 chaebol. Any of the following conduct was considered to be abuse of a dominant position: unreasonably determining, maintaining, or altering the price of a good or service; unreasonably restricting the sale of a good or service; or unreasonably interfering with the business activities of other firms (Chang 1996). This list reflects the belief of Kim Jae-ik's advisory team that the price inflation of the late 1970s resulted at least in part from arbitrary price increases by large firms holding dominant market positions.

The law also contained provisions aimed at vertical restraints; for example, it proscribed on a per se basis almost all retail price maintenance (again reflecting concern at the time of the law's passage with price inflation) and a number of unfair trade practices such as unreasonable refusal to deal, false or deceptive advertising, coercive tactics to force another firm's customer to switch suppliers, and unreasonable or coercive use of asymmetric bargaining power. An amendment to the KAA in 1984 covered subcontracting practices designed to promote fairness in sectors in which large contractors (i.e., chaebol-affiliated firms) held market power over smaller supplier firms.

In addition to these features more or less standard for antitrust law, the KAA contained some provisions that were idiosyncratic and meant to cover certain practices of the chaebol unique to Korea. These included a prohibition on the establishment of holding companies, a measure intended to inhibit new activities entered into by the chaebol being incorporated into separate companies under the control of a common chairman. The prohibition seems to have been meant mostly to limit the power of what came to be known as the "office of the chairman" in each of the large groups, but by most accounts it failed to achieve that goal.

Another provision required the KFTC to identify the 30 largest business groups in Korea, ranking them by the total assets of all affiliated companies; a company was considered to be an affiliate of a group if it was under the control of the same single person or entity as other firms within the designated group. Foreign-owned firms were not, for these purposes, considered to be group members or controlling entities (thus, if a foreign firm owned several subsidiaries in Korea, these would not be counted as one of the largest groups even if the value of their assets would otherwise have qualified them for inclusion). Furthermore, subject to exceptions, the following held:

- There was to be no direct cross-ownership; for example, if firm A held shares in firm B, where A and B were members of the same group, then B could not hold shares in A.
- No member firm of a group could increase its holdings in the equity of another domestic Korean firm (not a member of the group) above 25 percent. This provision was designed not just to prevent the largest groups from entering new businesses by acquisition (as Samsung had done in shipbuilding) but to prevent them in principle from entering any new activities. However, as we shall see, this prohibition was subject to exceptions that rendered it all but useless.
- No firm in such a group was allowed to guarantee the debt of another firm in the group by an amount more than 20 percent of the net assets of the guaranteeing firm.
- Finance and insurance companies belonging to a group were not allowed to exercise voting rights in shares held in affiliated firms.

These were tough provisions in principle (some of the toughest did not come into effect until 1986), and the KAA was a law with the potential to check the power of the chaebol considerably. However, from the beginning, this power was sharply circumscribed. To begin with, the KFTC was made subordinate to the Economic Planning Board, and thus competition policy was made subordinate to industrial or trade policy. (The KFTC did become an independent agency in 1994.) Furthermore, especially during the early 1980s, when the priority was to get a stagnant economy moving again, neither the EPB nor anyone else in the Chun administration paid very much attention to fostering competition. Rather, as already suggested, the new law was seen more as a vehicle for regulating price increases (Chang 1996) than regulating competition. During the period 1981-90, though the KFTC investigated a total of more than 5,000 cases of conduct alleged to be in violation of the KAA (Yoo S. 2000, from data reported in KFTC annual reports), little action was taken beyond issuing warnings to the putative offenders.

Moreover, major exemptions to the provisions directed against the power of the chaebol reduced the potency of the law. For example, the limitation on the acquisition of equity ownership in nonaffiliated firms did not apply if a "large business group" (one of the 30 designated groups) acquired shares of other firms under certain laws (e.g., the Manufacturing Development Law or the Tax Exemption Law). Also, if a capital investment were made to maintain a technological cooperation relationship or if the KFTC were to determine that a capital investment by a large business group was necessary to strengthen the international competitiveness of a "priority sector" as designated by presidential decree, the investment would be permitted. Thus, the provision in the KFTC designed to keep the chaebol from entering new activities was all but neutralized if any of these exceptions could be invoked. Also, most practices that might violate the KAA were exempt from the law if they were carried out in response to other regulatory statutes. Finally, some sectors were exempt from coverage by the KAA.

More generally, the law failed to address a core aspect of the chaebol issue—that by virtue of their size and family connections, these groups wielded influence beyond that created by market dominance. In other words, the power of the groups derived not from market power so much as political power. The KAA, even had it been more rigorously enforced to reduce market power, would not necessarily have been effective in reducing the power of the groups exercised through political channels.

A second major reform undertaken during the early Chun years at the recommendation of Kim Jae-ik was privatization of the banking system, whereby almost all banks that had been put under government ownership in 1962 were returned to private ownership. A major justification for this action was to end what had become financial dualism in Korea: favored enterprises could receive credit on preferential and even subsidized terms while other firms had to go to so-called curb markets for financing, where loans typically bore very high rates of interest. But this reform did not achieve this goal, as financial dualism persisted; indeed, curb market finance seemed to be playing an increasingly important role in channeling savings into investment even after the banks were privatized (SaKong 1993). According to some sources (e.g., Kim Dae-jung 1996), even though the banks were privatized, they remained during the Chun years under effective government control in that they lent only to firms in favor with the government. In fact, the government continued after privatization to control the appointment of the top officers and directors of the banks. But the government did take steps to ensure that the banks did not come under chaebol control: no shareholder was allowed to own more than 8 percent of the equity of a bank, and measures were taken to disperse bank ownership widely.

Thus, the potential impact of the KAA and of banking privatization was blunted. Doubtless part of the reason was that as growth resumed, pressure for reform diminished. Alas for Chun, however, three events kept him from receiving much credit for the economic turnaround. They also brought to an end his efforts to instigate reform that might lead to greater economic fairness in Korea.

The first episode was a scandal in 1982 involving his friends and in-laws. The scandal centered around Chang Yong-ja, a female socialite, and her husband Lee Chol-hi, who was related to Chun's wife. Chang and Lee were found to have been operating in the curb market by lending to large groups and taking promissory notes from them. The two then sold the notes into the securities markets, so that the notes were not retired when the loans were repaid. This proved to be fraud on a large scale: the total value of the promissory notes they sold equaled about 13 percent of the total currency in circulation (Clifford 1994). When the scam was revealed, it was also found that Chang and Lee had used their relationship with Chun and his wife as their main selling point to induce firms to borrow from them. Although no hard evidence ever was uncovered to suggest that Chun or his wife were directly involved in the scandal, parties to the fraud did include a number of close relatives of Chun's wife as well as senior officials at banks who had been appointed by Chun and who were found to have been bribed by Chang to advance funds to companies to which Chang and Lee had made loans. The scandal created a widespread feeling within Korea that the Chun government was using its power in order to enrich cronies and relatives, and it brought to a halt (and made a mockery of) efforts by Chun and his economic advisors to launch an anticorruption drive.

The second event that undermined Chun was a tragedy that almost claimed his own life. In late 1983, in Rangoon, Myanmar, there was an assassination attempt against Chun, who was visiting with a number of top officials of his administration. The attempt was carried out by North Korean commandos, who planted a claymore mine near where Chun was to have sat during a welcoming ceremony. When the explosive was detonated, Chun in fact had not yet been seated and thus escaped unscathed. But Kim Jae-ik and sixteen others were killed, including Deputy Prime Minister So Sok-jun, an ally of Kim Jae-ik in seeking economic reform. Without this team, Chun had little sense of what economic strategy to pursue. Indeed, following the death of Kim Jae-ik, the movement for economic reform largely lost momentum and direction (Noland 2000). The public perception of Chun thereafter increasingly became one of a man who lacked both vision and principle.

Third was the bankruptcy of the Kukje group, which was at the time the sixth largest of the chaebol. The group was liquidated in 1985—a move that might, under different circumstances, have been positive both for Korea's economy and for Chun's political fortunes. One reason for the complications, as Kim Dae-jung has suggested (1996), was that the bankruptcy might have been caused at least in part by banks' unwillingness to advance funds to the group because its owners were in political disfavor. Kukje's chairman, Yang Chung-mo, in fact had openly supported the opposition party leader Kim Young-sam in National Assembly elections held earlier in that year. But the group was unquestionably in serious trouble. Like the other large chaebol, it had become a sprawling, diversified empire during the Park years, and some of its growth had resulted from taking over firms that were in difficulty. And also like other groups, in making these acquisitions it had relied on debt to an extent excessive even by Korean standards. Indeed, the group's inability to pay finance charges that were significantly in excess of cash flow was the main reason why it fell into distress in 1985. Although this type of problem was widespread among many groups, the Kukje group had a higher debt-to-equity ratio than any other chaebol in that year. Kukje was also notoriously poorly managed (Clifford 1994). For example, even as it was having trouble servicing its existing debt, it built an expensive headquarters building in downtown Seoul with financing obtained in the curb market. The office building neither created new revenue nor reduced costs, but the curb market financing added to what was already a suffocating level of debt service costs. Also, at a time when professional management skills were badly needed, high management positions in the group had been given to the chairman's several sons-in-law, none of whom was especially qualified to hold these jobs.

The shutting down of this group thus might also have been meant to send a signal to other chaebol that there were limits to the government's willingness to back the debt of a highly leveraged group. Indeed, following the closure of Kukje, the finance minister, Kim Mahn-je, summoned home Kim Woo-chung, the chairman of Daewoo, from a trip to Japan to warn him about what was regarded as excessive debt buildup at Daewoo. However, Kim Mahn-je also reportedly offered assurances to Kim Woo-chung that Kukje was the only group that would be forced into bankruptcy. Thus, the warning might have been perceived as hollow; Daewoo continued to rely as heavily as before on debt to finance expansion.

Even so, had Kukje been dismantled in an orderly fashion, the bankruptcy might have restored some of the credibility of the Chun government by sending a signal that the government was serious in seeking reform of the chaebol. Instead, Kukje's liquidation sent another strong whiff of scandal through Korea. In particular, the public strongly believed that the liquidation was designed to benefit cronies of Chun, notably the Hanil and Dongkuk groups whose chairmen were close to Chun. The liquidation was carried out largely in secret, and the process by which one group or another was awarded a piece of Kukje was not at all transparent. Prices paid by the Hanil and Dongkuk groups were apparently below what would have been realized in open transactions (Kirk 1999). Whatever the circumstances of the liquidation, in 1993 the Korean Constitutional Tribunal found that it had been unconstitutional.

Further Efforts to Reform the Chaebol

In spite of the setback created by the assassination of Kim Jae-ik, some carryover of the reform movement persisted into the later Chun years. Yet bad luck continued to follow Chun, as much of what reform as did take place was to have little effect—or, worse, unintended ill effects. For example, efforts were made in 1984 to carry out the recommendations of Kim Jae-ik's team about strengthening the system of credit supervision for large chaebol. Kim had advised the full implementation of measures first undertaken in 1974 to tighten credit to the largest groups by supervising the financial activities of these groups more strictly than those of other businesses. As had been the case earlier, the main concern in 1984 was that the debt levels of the largest chaebol were creating undue bankruptcy risk. The new measures were intended to freeze the total bank credit available to the largest 5 groups and to set ceilings on additional credit extended to the next 25 groups. Also, interest rates were deregulated on nonpolicy loans.

But, as in 1974, the new measures proved inadequate to achieve the stated goals. One main reason was that chaebol, especially the largest groups, began to raise funds from nonbank sources, often by establishing, acquiring, or expanding their own financial subsidiaries. By law, these had to be nonbank operations, because control of banks by the top chaebol was illegal (a group could hold up to but no more than a 5 percent share of the equity in a bank). However, during the 1980s the chaebol, and especially the top five groups, became increasingly adept at using nonbank financial subsidiaries to intermediate private savings into investment. Indeed, these subsidiaries began to act very much like banks regardless of their legal status. For example, six life insurance companies were then operating in Korea, three of which were under the control of a chaebol. These companies were subject to no financial disclosure requirements, but it can be assumed that in Korea, as in all countries, the life insurance business was characterized by low profitability and enormous cash flow. But, in most countries, low returns are accompanied by low risks, as life insurance firms hold highly diversified portfolios. In the case of the Korean chaebol-affiliated life insurance firms, about 60 to 70 percent of the products sold (their liabilities) were "endowment products"—financial instruments with perpetual market value more akin to savings accounts than to term insurance products, which pay off only on the death of the policyholder (and which can expire prior to his or her death). Moreover, almost half the assets of Korean life insurance companies were loans to corporations within the group that owned the life insurance company. Thus, Korea's life insurance companies came to be seen as private piggy banks for the chaebol that borrowed from the public in order to fund activities within the group.

In addition, during the 1980s the chaebol acquired or created merchant banks that engaged in underwriting primary capital market security issues, leasing operations, and short-term lending. These operations, like those of the life insurance companies, were not subject to prudential supervision by the Bank of Korea; and also like the life insurance companies, merchant bank lending was concentrated within the groups that owned them. Furthermore, the chaebol established or acquired other nonbank financial institutions that could serve as captive sources of finance. These included securities companies, whose function was to issue and guarantee bond issues by affiliated firms. The large chaebol also created investment trust companies (ITCs). The role of the latter somewhat resembled that of banks, in that both types of institutions take deposits and make loans. But unlike a bank, an ITC also operates somewhat like a mutual fund; in principle, it helps small investors to hold diversified portfolios of securities. In practice, chaebol-affiliated ITCs held stock only in other chaebol-affiliated firms. In later years, these ITCs would be associated with some of the worst abuses of funds invested by minority shareholders of these groups.

Some of these institutions had been acquired before the 1984 measures were enacted. For example, in 1963 Samsung had acquired a small life insurance company, the Dongbang Life Insurance Company. But after 1984 this company's activities were expanded significantly; in 1989 it was renamed Samsung Life Insurance. Likewise, a small fire and marine insurance company that had been acquired in 1958 by Samsung was enlarged following the 1984 measures. Symbolizing the growing role of finance in the Samsung group, during the mid-1980s both these companies moved into new office buildings in downtown Seoul designed to accommodate their increased business activities. In 1988 Samsung further enlarged its financial empire by acquiring a credit card company. And in 1992, what had been the Kukje Securities Company was acquired and subsequently enlarged and renamed Samsung Securities. Thus, by 1992 Samsung had emerged as a major supplier of nonbank financial services.

This pattern was repeated at most of the largest chaebol. By the early 1990s, for example, the Hyundai group had established or acquired no fewer than eight financial affiliates, including all the kinds described above. Likewise, Daewoo held affiliates corresponding to each of these types of institutions. In 1980 the LG group acquired Pusan Investment and Finance, a merchant bank that was later renamed LG Merchant Bank, and then in 1982 established Goldstar Investment and Finance, which was built into an investment bank. This group had already acquired insurance operations as well as a security firm in the 1970s, and during the 1980s the activities of these affiliates were enlarged. In 1985 the same group acquired Donghae Mutual Savings and Finance Corporation, and in 1987 Korean Express, a credit card issuer. In 1988 LG established LG Investment Trust Advisors.

In contrast to the other big five, the SK group was somewhat slow to get into the supply of financial services. This group established a life

Table 3.1 Share of assets of nonbank financial institutions owned by chaebol in Korea, 1990 (percent)

Type of institution	Share of top 5	Share of top 10	Share of top 30
Life insurance company	36.5	36.5	38.4
Marine and casualty insurance	28.0	41.4	44.5
Securities firm	26.3	36.5	63.1
Merchant bank	12.8	23.3	23.3
Short-term finance firm (ITC)	7.2	10.1	29.9

Source: Yoo S. and Lim (1997).

insurance company in 1988 and a securities firm only in 1995. It doubtless took these actions after observing the success of the other groups in obtaining finance for expansion from their subsidiaries.

Not all of the nonbank financial corporations in Korea were, however, under control of the chaebol. Table 3.1 reproduces estimates by Yoo Seongmin and Lim Young-jae (1997) of the total assets of each type of nonbank financial corporation held by the top 5, top 10, and top 30 chaebol respectively in 1990.

During the 1980s, as might be expected as a consequence of the expansion of nonbanking financial activities by chaebol, the shares of nonbanking financial institutions in Korea of both loans and deposits increased; the shares of deposit money banks correspondingly decreased, as did the shares of government financial development institutions (the Korea Development Bank, the Export-Import Bank of Korea, and the Long Term Credit Bank of Korea; see table 3.2). The share of both deposits and loans of life insurance companies grew especially quickly as the chaebol expanded these activities.

Samsung, Hyundai, and Daewoo became particularly adept at converting these firms into quasi-banks. Thus, the chaebol were able to use what amounted to captive nonbank financial firms to circumvent, or at least minimize the impact of, restrictions placed on bank lending that were intended to keep these groups from further dominating the Korean economy. For this reason, and also because the privatized banks exhibited clear preferences for lending to the chaebol despite the 1984 measures, the growth of the chaebol was hardly checked during the Chun period and the succeeding presidency of Roh Tae-woo. In fact, by some measures, the shares of the largest 5 and 30 groups in the Korean economy actually increased during the Chun years, though by other measures they decreased slightly. For example, the shares of Korean value added of the top 5 and top 30 groups in 1983 in the mining and manufacturing sectors (1983 is the first year for which such data are available, pursuant to passage of the Korean Monopoly Regulation and Fair Trade Act; see

Table 3.2 Shares of deposits and loans in Korean institutions, 1980, 1985, and 1990 (percent)

	1980	1985	1990
Deposit shares			
Deposit money banks	68.4	53.5	52.5
Development institutions	3.8	4.1	3.1
Nonbank financial institutions	27.8	42.4	44.4
(life insurance companies)	4.8	11.1	12.6
Loan shares			
Deposit money banks	63.3	58.4	59.0
Development institutions	14.8	10.8	8.3
Nonbank financial institutions	21.9	30.2	32.7
(life insurance companies)	3.1	5.9	10.0

Source: OECD, *OECD Economic Surveys: Korea 1998*, table 9; from Bank of Korea data.

above) were 16.7 and 32.4 percent. In 1987, at the end of the Chun presidency, these shares were 19.1 and 32.6 percent; thus, the big 5 groups increased their share of value added, but the share of the next 25 groups fell somewhat. But share of value of shipments of the big 5 between 1980 and 1988 fell slightly, from 22.6 to 22.0 percent, and the share of value of shipments of the top 30 groups fell from 40.4 to 38.2 percent. By the end of the Roh presidency in 1993, the share in value added of the big 5 chaebol had further increased to 20.3 percent, and the share of the top 30 had also increased, to 33.5 percent (implying that both the top 5 and the next 25 groups increased their share of GDP). These increases in the relative size of the chaebol indicate very substantial increases in the absolute size of the groups (Yoo S. and Lim 1997, from Korea Fair Trade Commission data).

One important role of nonbank financial institutions was to reinforce family control over the chaebol during this period of rapid expansion. These institutions became major shareholders in the nonfinancial affiliates of the groups, while themselves remaining under the firm control of the founding chairmen of the groups (or, in some cases, their descendants, when founders had died or had given up active control). To be sure, the chaebol-affiliated firms also had minority shareholders and, as the chaebol expanded, equity financing helped to underwrite the expansion; as a result, by the late 1980s total voting shares held by minority shareholders significantly exceeded those held by the founding families. But in no way did dilution of their share of ownership weaken the control of the founding families over their expanding empires. In fact, what the dilution often implied was that nonfamily shareholders bore risks for new ventures of the chaebol but did not enjoy the returns if they succeeded, because new ventures often were financed by debt that was guaranteed by more established subsidiaries. The established subsidiaries were, in part, owned by minority shareholders, but not the new ventures, which were family-owned. If the new venture panned out, all return on investment went to the family. If the new venture failed, loan guarantees would kick in, ensuring that part of the loss was borne by nonfamily shareholders.

In 1990, according to the KFTC, in the top 30 chaebol the total equity share of the founding families was 14.7 percent; internal shareholdings controlled by the families accounted for another 36.3 percent, giving the founding families an effective share of 45.4 percent.[2] This share would not change much over the next six years. The founding families' shares, direct or indirect, were higher in the top five chaebol: in 1990 the average direct equity share of the families averaged 13.3 percent but internal shareholdings were 36.3 percent, for a total share of 49.6 percent. Among the top five, however, the founding families' total (direct and indirect) shares varied substantially from group to group. At the top of the list, this combined share was 60.2 percent for Hyundai's Chung family; on the bottom, LG's Koo family held a combined share of only 35.2 percent.

In all of the large chaebol, in fact, and in spite of the provision of the KAA designed to prevent this, during the 1980s power became increasingly centralized in the office of the chairman or, as these offices were known formally, the "planning and coordination offices." The offices of the chairmen (in Korean, the *chongsu*) informally fulfilled the role of determining overall policy (see Yoo S. 1999, 2000). They typically employed small but well-trained teams of professional managers (many with MBAs from major US business schools) who assisted the chairman. According to the Organization for Economic Cooperation and Development (*OECD Economic Surveys: Korea 1998*), in all of the largest five groups, this office directly controlled the top management of affiliated firms. In principle, those firms each had a board of directors that was legally required to be independent and to report to all shareholders, not just the founding family shareholders.[3] In practice, the offices of the chairmen greatly impinged on the independence of these boards of directors; indeed, the boards typically acted almost as agents rubber-stamping the decisions taken by the chairmen.

2. Also, Yoon (1998) notes that these figures represent only the interests of family members in stock exchange-listed affiliates of the chaebol. Family control of unlisted nonaffiliates was considerably higher (upward of 65 percent), and these unlisted affiliates often held significant shares in listed affiliates. Thus the effect of this "pyramiding" (holding of shares of one company by another) gave the families greater control than might appear at first glance.

3. In the aftermath of the 1997 crisis, steps were taken to try to make directors of chaebol affiliates more independent of the offices of the chairmen, in particular requiring that "outside" directors be named who would in principle represent minority shareholders. See chapter 4.

In addition, in each of the large chaebol, there could be identified at least one affiliate (sometimes more) that held large blocks of shares of other affiliates (Yoo S. 2000). These "core" affiliates acted something like holding companies, even if they also engaged in other activities and therefore did not qualify as pure holding companies (as would have been illegal under the KAA). The type of subsidiary serving as the core varied from group to group; in most cases it was the oldest or at least one of the oldest subsidiaries. Thus, at Hyundai it was the original firm, the Hyundai Construction and Engineering Company; at Samsung it was the Samsung Corporation, the trading affiliate. Daewoo also used its trading affiliate—the Daewoo Corporation, the firm that had started as a textile trading operation—as the core subsidiary.

Vestiges of Industrial Policy Remain During the Chun and Roh Eras

Although the general philosophy of the Chun presidency and, even more overtly, the succeeding Roh presidency was to try to move Korea away from government planning toward the adoption of market-oriented policies, government planning was by no means wholly abandoned. Indeed, in what was one of the last of the major industrial policy initiatives, the drive to develop a Korean capacity to produce advanced semiconductor products (the Very Large Scale Integral Circuit or VLSIC project), we can see something of a reversion to the policies of the HCI drive. This project in fact arguably (and ironically) represented the most successful implementation of such policies.

The genesis of this project was in the first years of the Chun presidency. Chun himself had a strong interest in science and high technology, and he believed that Korea's future lay with the high-tech and science-based industries (see Kim Y. 1995). The Science and Technology Advisory Council was thus created as an office within the Blue House in 1980. Funds were increased for Koreans to study science and technology abroad at the graduate level, and more support was given science and technology at Korean universities as well. Between 1977 and 1988, the number of Koreans involved in research and development quintupled, rising from 11,700 to 56,500 (Kim Y. 1995). The government funded the establishment of an industrial park to be devoted to semiconductors and computers in 1982, contributing $60 million to help to create the Electronics and Telecommunications Research Institute in this park. In 1983, laws were passed restricting the importation of computers and related equipment at the low end of the market. They also restricted foreign direct investment in this sector unless the direct investment was in the form of a joint venture with a Korean firm. Joint ventures by foreign computer firms subsequently were created with Samsung, LG, Hyundai, and Daewoo. A 1985 law (the Industrial Development Law) had the intent of replacing policy loans with direct support of R&D as the main tool of industrial policy. In 1983 the Korean government helped to fund R&D projects involving more than 100 firms, by no means all of them chaebol affiliates.

The VLSIC project, when it got into full swing in 1987, came to take on many of the characteristics of the HCI drive. The goal was to enable Korean firms to become internationally competitive suppliers of a product embodying advanced technologies; for this to succeed, there had to be major front-end investment in developing the necessary technical capabilities as well as in building the necessary plant and equipment. Thus, as with earlier HCI projects, the government was involved in the creation of both human and physical capital.

As with the HCI projects, the VLSIC project did not actually represent the first entry by Korean firms into a new sector. The Samsung Semiconductor and Telecommunications Company had in fact begun to produce 64 kilobyte (64K) DRAMs in 1983. Samsung Semiconductor and Telecommunications Company had been created in 1974 when Samsung acquired Korea Semiconductor Company, a start-up venture by Dr. Kang Ki-dong, a Korean American scientist-entrepreneur who had gained experience at Motorola (Kim L. 1997). But until the early 1980s, Samsung produced relatively unsophisticated products.

Its entrance into the 64K DRAM market required a substantial leap forward in the underlying technology. Samsung at first sought to license the needed technology from foreign firms, but found no willing partners. Samsung then set up a task force in 1982, which ultimately identified small (and mostly struggling) US firms that possessed the technology it required. It proceeded to obtain that technology either by buying or licensing it from these companies or by buying the companies outright. A subsidiary was set up in California that successfully hired talent from several US firms. In 1984, Samsung introduced its first 64K chips to the market (Kim L. 1997). Hyundai and LG quickly followed; both were able to license the needed technology.

On the one hand, this manufacture represented a substantial accomplishment, because 64K DRAMs were very sophisticated items. On the other hand, at the time of their first production by Samsung, the world standard was no longer the 64K DRAM but rather the 256K DRAM, which had been introduced in 1982. Korean firms thus were producing an obsolete, albeit very sophisticated, product when they entered the sector in 1983. This continued to be the case when Samsung began to produce 256K DRAMs in 1984, shortly after the introduction of 1 megabyte (1000K, or 1M) DRAMs by the internationally leading firms in Japan and the United States. And when Samsung, followed by Hyundai, did introduce 1M DRAMs in 1986, the foreign competition had gone on to 4M DRAMs. Furthermore, foreign sources of technology had by then all but dried up. In addition, in 1986 Korean firms lost a series of lawsuits brought by US firms charging patent infringement for DRAM design. In response, the Korean government that year created a research consortium (the Electronics and Telecommunications Research Institute, or ETRI) made up of the three Korean DRAM producers—Samsung, Hyundai, and LG—and six Korean universities. The objective was to develop technologies to enable the Korean firms to produce 4M DRAMs (and beyond) without infringing foreign patents.

Thus, the ETRI-VLSIC project was meant not to launch Korean firms into a new market but rather to bring them up to speed relative to their international rivals. In this objective, the program succeeded; by late 1992, when international competitors introduced 64M DRAMs, Korean firms were able match them with chips of the same capacity. Likewise, in 1994 Korean firms were among the first to introduce 256M DRAMs—though not without outside help. By then Korean firms were involved in strategic alliances with international producers. Korean market leader Samsung, for example, participated in such alliances with eight US firms and six Japanese firms, among them industry leaders including Micron, Intel, Texas Instruments, IBM, AT&T, Toshiba, Sharp, NTT, and Fujitsu. LG and Hyundai also were in alliances with some of these same firms, albeit not as many as Samsung (a difference that helps to explain why Samsung was the industry leader). The interest of the foreign firms was not simply access to the Korean market, for which it was necessary to form alliances with Korean firms. They also wished to gain new sources of supply for vital components, thereby protecting their own production networks should existing suppliers be unable to meet delivery schedules or should other disruptions occur.

Exactly how much government assistance was involved in the ETRI-VLSIC project is not easily ascertained. One possible indicator of assistance was that in the years after 1985, the volume of preferential loans classified as "for equipment of export industry" rose dramatically (see table 3.3). This increase came as the total volume of preferential loans peaked in 1987 and then declined sharply in 1988, when interest rates were partially deregulated. Whether the former loans were largely directed toward the VLSIC project is not something that I have been able to verify, but it is a reasonable surmise (and, if correct, would seem to belie the claim of at least certain Korean authors—e.g., Sohn, Yang, and Yim 1998—that the development of the semiconductor sector in Korea was funded completely privately).

Again, government assistance necessarily was selective, because of the scale of the undertaking. The major beneficiaries of this program were three of the largest chaebol: Hyundai, Samsung, and LG. Ultimately Samsung emerged as the world's largest producer of DRAMs. For a time, Hyundai became number one after it took over the semiconductor division of LG following the 1997 financial crisis. At that time, Hyundai could in fact

Table 3.3 Preferential loans in Korea for "equipment of export industry" and total preferential loans, 1985-90
(billions of won)

	Preferential loans for equipment of export industry	Total preferential loans	Ratio of loans for equipment of export industry to total preferential loans
1985	595.2	4,690.7	0.13
1986	1,866.9	6,366.4	0.29
1987	2,416.5	5,904.0	0.41
1988	2,725.8	5,003.5	0.54
1989	2,905.0	5,340.5	0.54
1990	3,015.0	5,986.1	0.50

Sources: Krueger and Yoo (2001, table 3), and author's calculations; from Bank of Korea data.

claim to be the world's largest builder of both ships and chips; unfortunately, these operations came close to bankrupting the group, which goes to show that being number one is not always what it is cracked up to be.

Although the VLSIC project was in some ways like the earlier HCI drive, there were differences as well. As already noted, the main initiative for the undertaking came from the three principal firms and not the government. Indeed, according to Sohn Chan-hyun, Yang Jun-sok, and Yim Hyo-sung (1998), government planners in the EPB were initially reluctant to support a venture by Korean firms into the DRAM business, which the planners saw as excessively risky given that production was then dominated by a few large American and Japanese firms (indeed, in the United States there was much hand-wringing over what was then perceived as growing Japanese preeminence in this area; some American analysts in the 1980s described these devices as "technology drivers," meaning that dominance in producing DRAMs was key to further technological progress in the semiconductor sector).[4] Thus, no subsidies other than those for R&D were given to semiconductors in the early years of the Chun presidency. It was only after these firms had demonstrated some measure of success that further government backing came. Furthermore, once the VLSIC project did get under way, by most accounts private money was put at risk, unlike during the HCI period.[5]

4. In the United States a government-sponsored consortium, SEMATECH, was therefore organized to reassert US dominance in the manufacture of DRAMs.

5. On this point, however, there is some conflict in published accounts of the project, which in fact tend to be a bit sketchy. Amsden (1989) claims that this undertaking had subsidies, some of them nontransparent; Sohn, Yang, and Yim (1998) emphasize the role of private capital and claim that government assistance was minimal. Neither account

But even though Korean firms did succeed in becoming large producers of DRAMs, they never became dominant producers. Indeed, by the time they achieved full-scale operations and had caught up technologically with rivals in Japan and the United States, there were numerous international competitors supplying state-of-the-art DRAMs, including some based in other Asian markets (notably Taiwan and Malaysia). Also, by the early 1990s it was becoming clear that claims for a pivotal role of DRAMs as so-called technology drivers were quite exaggerated. Instead, DRAMs were fast evolving into a high-tech commodity item that would increasingly be sold on the basis of price rather than advanced technological features—even though the product was upgraded during the 1990s, with individual microchips packing more and more memory.

Notwithstanding these unforeseen events, Korea's venture into semiconductors must be rated a qualified success. By 1993, only a decade after Korean firms entered the market for DRAMs and just six years after the VLSIC project began, Korea was exporting more than $7.7 billion of DRAMs, and Korea's share of the DRAM market was close to 20 percent in both the United States and Europe (Sohn, Yang, and Yim 1998). In this growth, a 1991 agreement between the United States and Japan on DRAMs, whereby a floor price was set on Japanese DRAMs exported to the United States, benefited Korean firms significantly. Korean producers were able to gain US market share by selling below the floor price.

One of the firms in the VLSIC project, Samsung, has garnered very high profits throughout the 1990s from semiconductor sales, especially during periods when demand was growing faster than supply. Some analysts believe that most of Samsung's profits during the 1990s came from electronics, relying largely on semiconductor manufacture or manufacture of products employing semiconductors. Samsung has emerged as one of the world's technological leaders in this sector, and profits from its electronics business doubtless were instrumental in enabling the group to remain financially sound during the 1997-98 crisis, unlike several other of the large groups. Hyundai and LG never were to experience similar success. Indeed, when the semiconductor operations of these two firms were merged following the 1997 crisis, the resulting firm (now named Hynix) quickly became a problem child; in an earlier time, it would have been termed an "unsound firm." (The story of Hynix is taken up further in chapter 5.)

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offers quantitative estimates of either the amount of private capital involved or the amount of public subsidy.

On the basis of the indirect evidence (the rise in preferential loans for equipment of export industry noted in the text and table 3.3), I find Amsden's version most credible (otherwise, where did these loans go?), but the extent of government sponsorship of the VLSIC project can never be fully known.

Despite the problems of Hyundai and LG, the semiconductor venture was indicative of Korea's emergence as a center of high technology activity during the 1980s and 1990s. Between the early years of the Chun presidency and the final years of the Roh presidency, the amount of research and development done in Korea increased dramatically: R&D as a percentage of GDP rose from 0.81 percent in 1981 to 2.17 percent in 1992. Also, the number of Korean students acquiring foreign graduate degrees in technical subjects shot up. During this time, real GDP more than quintupled, so that R&D in fact increased more than 15-fold. Furthermore, whereas in 1981 R&D in Korea was about 55 percent government funded, by 1992 it was 82 percent funded by private firms.

One consequence of these transformations has been that in 2002, one of the most positive aspects of Korea is prowess in information technology, not only because Korean firms are at the forefront in producing it but also because Koreans are leaders in using it. This prowess owes much to the turn toward high technology and science-based activity favored by Chun Doo-hwan during his years as president and advanced further by his successor (and co-conspirator) Roh Tae-woo.

In matters other than the VLSIC project, the Korean government was still in the industrial policy business during the Chun and Roh years; in fact, some projects persisted into Kim Young-sam's presidency, when industrial policy was formally ended. For example, responding to large losses being incurred by Korean motor vehicle manufacturers (despite heavy protection from imports) following the second oil shock of 1979, the government in the early 1980s attempted to create mergers among what were then six manufacturers. The idea was to create companies producing at the minimum efficient scale, which no Korean manufacturer had achieved by 1980. To this end, the government announced in late 1981 a program whereby Hyundai Motor Company was to acquire the troubled automotive division of Daewoo and, in exchange, Hyundai was to yield its power generation business to Daewoo. (This type of "big deal" that forced trading of operations among the chaebol would be attempted again following the 1997 crisis.) At the same time, Kia was to acquire Dong-A, a manufacturer of light trucks, buses, and minivans. In both cases, the firms would be given national monopolies—Hyundai's for passenger cars and Kia's for light trucks, buses, and minivans—which were meant to last until 1989. The first of these deals fell through because Daewoo believed that its automotive operation was more valuable than Hyundai's power generation business, and no scheme of compensation for the difference in value could be agreed on. Kia did acquire Dong-A and Hyundai exited the truck business, leaving it as a monopoly to Kia. Thus, the passenger car business was a duopoly, while light trucks was a monopoly. Sohn, Yang, and Yim (1998) note that the outcome was doubtless favorable in the passenger car market, which in Korea was subject to heavy import protection; they surmise that with no effective competition in this market, Hyundai likely would have produced an inferior product at an exorbitant price.

As it happened, even facing some domestic competition Hyundai was able to establish a high-volume manufacturing operation for subcompact cars. This enabled Hyundai, with limited success, to begin exporting to the United States, where incumbent US firms largely had exited the subcompact market (as indeed had Japanese exporters). Thus, the intended goal of the policy—that Hyundai create the scale and efficiency seen as necessary to become an effective international competitor—was achieved without a monopoly ever being created. Furthermore, Hyundai's success actually served as something of a shot in the arm to Daewoo Motors, which implemented measures personally supervised by chairman Kim Woo-chung to increase its own scale of operation, improve its efficiency, and improve the quality of its product (Kim L. 1997).

In 1987, the 1981 policy measures were revised to increase competition in the Korean motor vehicle industry. The monopoly granted Kia was allowed to expire, and Hyundai reentered the light commercial vehicle market and by 1993 had overtaken Kia to become the market leader. Kia in turn introduced the Sephia automobile in 1992, thus reentering the passenger car business.

In 1992, the final year of the Roh presidency, the government announced the XC-5 project, intended to put Korean firms into the ranks of top international car manufacturers. In 1994 this program was extended under what was known as the XC-5 program, which was designed to help Korean companies develop the expertise needed to independently develop automotive technology. Korean firms were still relying on foreign technology and imported components to some significant degree at that time, although in 1994 Hyundai introduced an "all-Korean" car—that is, one that contained no foreign components and had an engine of Korean design.

Also in 1992, Samsung was given permission to enter the passenger car business under authority granted to the KFTC the year before. This move was to prove to be a mistake for Samsung, as is detailed later, but the permission was very welcome to the chairman of the Samsung group, Lee Kung-hee, who had taken over in 1987 following the death of his father, Samsung founding chairman Lee Byung-chol. Lee Kung-hee had sought for several years to enter this sector and had been frustrated by the government's refusal. Success in creating capacity in the automotive sector is not, however, the same as creating demand; demand for cars in Korea during the late 1980s and early 1990s did grow rapidly—but not as fast as supply. This might have been a warning signal, but it went unheeded. Indeed, Samsung executives whom I interviewed told me that chairman Lee Kung-hee's own advisors counseled against Samsung's entry into the automotive sector, but he overruled them.

In fact, as Korea entered into the 1990s, some wrong turns were taken and a number of warning signals went unheeded. We turn to this matter next.

Mistakes Mount in the Second Half of Roh Tae-woo's Presidency

For all of the heavy-handedness of the Chun years, they were marked by generally good macroeconomic management and a rising performance of the Korean economy, once growth resumed in 1982. This trend seemed to continue into the first years of the Roh presidency. Investment continued to be high and savings also rose, enabling a current account surplus. But as time progressed, this administration began to display economic mismanagement and increasingly poor economic performance, especially in its final three years. The main economic problems were that both inflation and a trade deficit reemerged. These were associated with an easing of credit in 1990 that was urged by the leaders of the chaebol but also was necessitated by large wage increases that were granted during the first years of Roh's presidency. In addition, the late Roh years, like those of his predecessor, were tainted by a number of scandals involving corruption; these would later lead to criminal charges being brought against Roh personally. The ultimate consequence was that Roh left office largely in disgrace.

While the GDP deflator was 16.4 percent during Chun's first year, that rate declined steadily, reaching a low of 2.8 percent in 1986. In 1987, Chun's final year, there was a slight rise in this deflator to 3.5 percent, which was worrying but not yet a problem. In the first year of the Roh presidency, 1988, the deflator rose further to 5.9 percent. Rising inflation arguably was indirectly one result of moves toward democracy undertaken in Korea in the late 1980s. When it was announced in 1987 that presidential elections would be held, only slightly more than 15 percent of all Korean workers belonged to unions, and there was much feeling across the country that unions were not effective in securing wage increases. But under a more democratic government, union leaders suddenly felt emboldened to make wage demands without risking reprisal. Thus, whereas in 1984-86 there had been slightly more than 200 labor disputes per year, the number jumped above 3,700 in 1987. Furthermore, whereas in the earlier years less than 23 percent of the disputes had been over wage increases, in 1987 this percentage surged to more than 70 percent. In a word, the Korean labor movement became militant as Korea democratized. In 1988 the number of disputes decline somewhat, to 1,873, about half over wage increases; but many of these resulted in strikes, some of which turned violent. The average real wage increase in manufacturing began to creep upward, from 6.2 percent in 1986 to 8.3 percent in 1987 and to 11.7 percent in 1988. At the same time, however, the marginal productivity of labor in manufacturing dropped from 8.8 percent in 1986 to 5.4 percent in 1987, and then to barely more than 1 percent in 1988, so that cost push inflation was now arguably occurring in Korea. Meanwhile, the unionization rate in Korea increased, rising to 17.3 percent in 1987 and 22.0 percent in 1988.

These developments alarmed Roh's highly competent deputy prime minister and head of the EPB, Cho Soon. Cho's priority became tackling the inflation problem by contracting the rate of credit expansion and cutting back on most preferential loans; as a result, all such loans except those to acquire export machinery were eliminated. These measures had some positive effect: the GDP deflator fell to 5.2 percent in 1989, despite continuing real wage increases that now were greatly outstripping marginal productivity increases in the manufacturing sector (the real wage increase was 18.3 percent in 1989, whereas the marginal productivity of labor actually fell by about 0.5 percent). But real growth also fell, from more than 12 percent in 1988 to slightly under 7 percent in 1989.

Cho's plan also called for interest rate deregulation and for expansion of money and bond markets at unregulated interest rates. Had the plan been implemented, one likely outcome would have been some short-term pain (e.g., unemployment increases and possibly bankruptcies of some firms). It might also have resulted in more responsible demands from unions than those that were voiced at the time (and were to reemerge in the aftermath of the financial crisis in 1998). But the credit squeeze cut into the expansionary aspirations of the large chaebol, whose leaders heavily backed Roh's Democratic Liberal Party, as well as into the aspirations of the labor leaders, and in April 1990 both business and labor leaders persuaded Roh to oust Cho and most of his economic team. Thereafter, the emphasis was on "growth first," meaning mostly that rapid credit expansion resumed. Plans to deregulate interest rates were put on hold. Interest rates fell on nonpreferential credit, including curb rates, which went from 23.7 percent in 1989 to 20.6 percent in 1990, while the GDP deflator rose during the same period from 5.2 to 10.6 percent (and thus the real rate of interest on curb loans fell). However, on most outstanding loans to the chaebol, nominal interest rates were held constant, so that for them the real rate of interest actually fell less. Inflation continued to be high in 1991, with the GDP deflator reaching 10.9 percent; and according to an estimate by the Lucky Goldstar Research Institute (affiliated with the LG Group, and cited in Kim Dae-jung 1996), the rate of inflation on the consumer goods bought most often by low- to middle-income Koreans rose to almost 17 percent in that year.

Most of the credit expansion between 1990 and 1992 took place in nonbank financial institutions. This was enabled by an infusion in 1991 of 3 trillion won into investment trust companies, which as we have seen were to a large extent captive financial arms of the chaebol.[6] The

6. Cho Soon in the meantime had been named as governor of the Bank of Korea, a demotion from his previous position. He resisted the infusion to the ITCs, which was in fact illegal, and was sacked soon thereafter. Cho's removal from the governorship of the Bank of Korea resulted in renewed calls for central bank independence. He subsequently became mayor of Seoul.

share of nonbank financial institutions of deposits in Korea rose from 59 percent at the beginning of Roh's presidency in 1987 to 64.6 percent in 1989 and to 65.9 percent in 1991, while banks' share of deposits fell from 41 percent in 1987 to 34.1 percent in 1991 (data from Bank of Korea, *Monthly Bulletin*, various issues). This trend toward the rise of nonbank financial institutions had started however before the policy change of 1990.

Whereas during the Chun presidency Korea's balance of trade had improved markedly as inflation came down, leading in 1986 to a significant balance of trade surplus, in 1989 this surplus dropped to just over $5 billion. Then, in the following year, the current account turned negative by more than $2 billion. Belatedly, the won exchange rate began to depreciate, stabilizing at about 790 won to the dollar in 1992. The deterioration of the Korean current account might have been exacerbated somewhat by what Kim Dae-jung calls "a silly effort to please the American government" (1996, 150), whereby the Korean government called for Korean trading companies to increase imports of American-made and other foreign-made goods, mostly luxury items.

As a consequence of the easing of credit, real growth at first rose to 9.3 percent in 1990; but as inflationary pressures continued to mount, it declined to 8.4 percent in 1991 and then dropped to 4.7 percent in 1992 (Bank of Korea, *Monthly Bulletin*, various issues). The slowdown in 1992 was termed in Korea a "growth recession." The overall effects of the policies followed by Roh thus proved to be a spurt of growth, accompanied by problems of rising inflation and a growing trade deficit that made the growth spurt extremely short-lived.

Throughout the Roh years there also occurred a land and real estate bubble, with land prices rising by an average of almost 25 percent per year between 1987 and 1991 but stabilizing in 1992 (data from Ministry of Construction, as reported in Kim Dae-jung 1996, table 7.1). The winners during the upswing were the large chaebol that owned large amounts of land in Korea, particularly in urban areas. Some chaebol were actively involved in speculation, and some spectacular capital gains were made by certain of these groups. For example, the Lotte group bought land in Seoul for 80 billion won in 1988 and sold it for more than 1,000 billion won three years later. Much of the gains by other groups came simply from selling at high prices land that they had previously held. In May 1992, Roh made a gesture toward cracking down on land speculation by the large business groups by enacting a measure requiring the chaebol to sell all land not used for business purposes. Yet this measure backfired, at least as far as public opinion was concerned, because it induced the top 30 chaebol to sell upwards of 60,000 acres of land at large capital gains, with some of this land bought by government agencies.

Adding to Roh's mounting unpopularity was the performance of the Korean stock market and the government's efforts to stabilize it. In the first year of his presidency, the Korean stock market index rose from 630.1 to over 1000, during which time many ordinary Koreans bought stocks. But the market subsequently crashed down to the mid-600s, where it stayed for the remainder of his term. Over the five years of his presidency, the market thus was stagnant in nominal terms—but stagnation of course implied substantial real losses even to investors that held stocks at the beginning of the 1987 bubble, not to mention those that acquired stocks after prices began to rise. In late 1989, in a failed bid to reverse a falling market, the government ordered investment trust companies to borrow money to buy stocks. The government subsequently used public money to partially compensate those ITCs that had taken losses in an arrangement that excluded small investors. When word of this spread, crowds ransacked the Korean stock exchange and the offices of some large brokers. Despite the partial bailout, the balance sheets of the ITCs were severely damaged.

As if matters were not bad enough for the Roh Tae-woo administration, beginning in late 1991, as the administration was about to enter its fifth year (with the next presidential election only a year away), a number of corruption scandals became public that further tainted what had already become a widely unpopular presidency. The biggest of these involved Hyundai, whose chairman, Chung Ju-yung, disclosed that he had contributed 25 billion won—then worth about $30 million—to Roh for political favors. This disclosure was apparently in retaliation for the Roh government's having assessed Chung some $180 million in taxes when he began to pass some of his assets to his sons. Stories of further corruption then multiplied. It was alleged in the press, for example, that the Hanbo group had used a slush fund held in bank accounts under false names to buy favor with the Korea Land Development Corporation, a state-owned enterprise. Journalists also published allegations of kickbacks to the president associated with the 1989 stock market bailout.

Corruption had of course long been one of the darker sides of the whole Korean economic miracle, and Korea had already been through a number of scandals including the Chang/Lee scam of the early 1980s. What made the corruption scandals of the early 1990s different was that with newfound freedom of the press on the rise and the military dictatorship now four years in the past, stories about corruption were spreading more openly. Also, at least in some cases, these stories were better corroborated than those told earlier. Whether Roh was actually significantly more corrupt than his predecessors is not clear.[7] Perceptions that the Park Chung-hee regime was corrupt had been behind at least some of the unrest in 1979, and scandals had plagued Chun throughout his tenure as president. But during the Park and Chun years, news of scandals

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7. Chun and Roh were both convicted of corruption charges in 1997; see chapter 4.

spread mostly by word of mouth, with open criticism of corrupt behavior largely off-limits to the Korean press. In his final years in office, in contrast, Roh was subject to constant criticism in the press.[8]

In 1991, the earlier plan to deregulate interest rates was resurrected, as part of a four-phase program that also included other financial liberalization measures. However, the first phase was a modest one, covering the deregulation of only certain short-term rates. A second phase, mandating the deregulation of rates on all loans (except policy loans), as well as rates on corporate bonds and long-term deposits, was scheduled for 1993, after the presidential elections. The third and fourth phases were slated for 1996 and 1999, and their implementation was conditional on certain goals having been met (e.g., price stability). Monetary expansion was reined in to bring inflation under control, but arguably this restriction led to the "growth recession" of 1992 that turned public opinion against Roh. Had Roh simply allowed the policies of Cho to run their course, the case is strong that inflation would have been contained by 1990 so that growth could have resumed; but this is not what Roh chose to do.

In 1991 a number of measures meant to rein in the chaebol were also introduced. In an effort to contain the continuing diversification of these groups, each group was required to designate core companies and sectors, which had to be approved by the KFTC. Bank lending to noncore subsidiaries was subject to restrictions meant to discourage the chaebol from creating new subsidiaries operating in new sectors. However, in spite of these policies, the chaebol continued to diversify, not least because the KFTC was quite generous in what industries and sectors it allowed to be designated as "core" and permitted the list to be expanded every three years. Also, as described earlier in this chapter, the chaebol held nonbank financial subsidiaries from which loans could be raised; hence the restriction of bank credit to noncore chaebol affiliates did not necessarily prevent these affiliates from obtaining financing. Between 1991 and 1997, the total number of subsidiaries of the top 30 chaebol in fact increased from 557 to 819.

Moreover, the chaebol continued to use debt financing as they continued to increase capacity. Indeed, what was to be a long streak of expansion by these groups was launched with the easing of credit in early 1990 following the departure of Cho Soon from the government. Roh cannot be entirely blamed for this, of course, because most of this expansion took place during the presidency of Kim Young-sam; but it did begin under Roh.

8. Also, popular books were being published that were highly critical of Roh; for example, Kim T. (1991), which is cited by Kim Dae-jung (1996).

Taking Stock, to See the Forest Through the Trees

This book is not really meant to be an economic history of Korea. Rather, its focus is a specific problem: especially in the wake of the 1997 crisis and subsequent recession, and in spite of the reforms and growth of the economy that followed the period of crisis and recession, some of Korea's largest groups of firms remain quite unhealthy. This is an appropriate point to step slightly back and ask what has been revealed about this problem thus far.

In brief: the largest chaebol expanded at a rapid pace, largely financing the expansion with what was essentially other people's money (i.e., not the money of the families that controlled the groups). Because some of this money was advanced on preferential terms (i.e., there were elements of subsidy), this expansion, even though it created much benefit for the Korean people, also created much dissatisfaction. Discontent erupted because so much favoritism was shown to a small group of people—the owners of the chaebol. But beyond fomenting discontent, as events were to prove, this expansion also created enormous risk.

As has already been mentioned, some of the expansion resulted in overcapacity. But what precisely does "overcapacity" mean? On the most fundamental level, it occurs when the return on capital (the plant, equipment, and financial working capital needed to create economic undertakings) is not sufficiently large to warrant incurring the cost of that capital. Elementary economic theory holds that all other things being equal, if capacity is added to increase the supply of a good or service offered in a market, a point will eventually be reached at which there is a diminishing marginal return on the capital invested to create that capacity. The capital to be invested is optimal when the marginal return on capital equals the marginal cost of the capital. If we take as a working assumption that the supply of funds for investment is large relative to the funds required to finance a single undertaking, this cost is not affected by the undertaking and can be assumed to be constant. And if the return to capital declines as capital accumulates but the cost is constant, the optimum in fact will eventually be reached as capacity is expanded. Furthermore, because of diminishing marginal returns, if capital continues to be added once this optimum is reached, adding yet more capacity will result in the marginal return falling below the cost of capital, making the net return on this additional capital (marginal return on the capital minus its cost) negative. At this point, capacity can be termed "excess."[9]

9. How do supply and demand of the goods or services produced using this capital fit into the story? As capital is added, supply is increased: all other things being equal, this increase in supply drives down the price of the good or service so that the unit profit realized on selling the good or service is reduced. It is primarily for this reason that there is a diminishing marginal return on capital.

The above statements apply to one market. As a practical matter, of course, there might be excess capacity in one market but inadequate capacity in some other market, as apparently happened in Korea in the later years of the HCI drive.[10] In principle, an efficient capital market would prevent such imbalances from arising, because if the return on capital in one market (or, more precisely, on capital invested in the sector that supplies that market) were to be higher than in some other market, the capital market should stop advancing funds for expansion of capacity in the former and direct these funds toward the latter. Indeed, if capital markets were globally efficient (in the sense that financial institutions held complete and accurate information about marginal rates of return on capital in all markets globally), there never would be a differential between marginal rates of return on capital in different markets. For Korea during the 1960s, 1970s, and 1980s, there were new markets into which Korean firms could enter and earn higher returns than on existing operations. That they actually did so was a function of both capital market efficiency and at least some intelligent government planning.

But the emerging problem in Korea in 1992, when Roh Tae-woo stepped down and was replaced by a new president, Kim Young-sam, was not simply one of overcapacity per se. Overcapacity creates difficulties irrespective of how it has been financed. But in the case of the chaebol, as we have already seen, the bulk of new capital formation was financed by debt, and debt financing can create additional problems. The reason has to do with the cyclical nature of demand for many products and services. Debt financing results in a recurring interest cost being incurred by the debt holder—the firm that must be paid whether or not the capital financed by the debt generates enough cash to pay that cost. In fact, the recurring cost may be somewhat greater than that of interest charges alone, because the lender might demand some repayment of principle on the loan; the total charges that must be repaid on a recurring basis are termed the "service costs" of the debt. Obviously, the service costs of debt increase with the amount of debt that is incurred. If the interest rate is fixed, the service cost is invariant when the amount of debt is held constant. But even if the rate of interest is adjustable, the service cost of debt does not necessarily adjust to the firm's rising or falling revenue.

From a corporate point of view, the use of debt to finance capacity expansion can be attractive largely because debt service costs, or at least the interest component of these costs, receive favorable tax treatment. For tax purposes, interests costs are deductible, and that deductibility enables part of the cost to be borne in essence by the public treasury.

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10. Such imbalance occurs because the capital used to create supply in one market—e.g., steel—is specialized and cannot be used to supply a different market, such as that for petrochemicals.

The same is not true if capacity is financed, say, entirely through equity. Rather than being tax deductible, dividend payments to shareholders, which represent the "costs" of equity from the corporation's point of view, are taxable. From the viewpoint of existing shareholders, it can thus be preferable for new capacity to be financed by debt rather than by new equity,[11] if this equity is raised from persons other than the existing shareholders. This preference was especially strong in Korea, where the costs of debt were in effect doubly subsidized by the government (interest rates were below market, and interest payments were tax deductible as well).

However, because of the cyclical nature of earnings, the argument in favor of debt over equity finance has certain limits. If, in a cyclical downturn, return on capital temporarily diminishes because income falls, dividend payments on equity can be reduced or even eliminated if necessary to preserve the financial health of the firm. But service costs of debt must still be paid. Thus, in a prolonged downturn, if debt levels are too high the costs of servicing the debt can endanger the financial health of the firm or indeed drive it into bankruptcy, even if the firm is viable in the long run.

What level of debt is too high? There is really no absolute answer to this question (see Krueger and Yoo 2002). But a partial answer is that it depends both on how high is the firm's overall rate of return to capital and on how cyclical is the underlying market. As the overall rate of return on capital declines, the level of debt that is "too high," in the sense that it creates unacceptable risks to the firm, also declines; thus, other things being equal, a firm whose overall return on capital is low should not be as leveraged (i.e., have as high a debt-to-equity ratio) as a firm whose overall rate of return on capital is high. Also, the greater the fluctuation of demand (i.e., statistically speaking, the greater the variance of demand at any given price), the greater becomes the riskiness to the firm of high levels of debt.

Given these definitions, were the debt levels of the chaebol in the early 1990s too high? Again, this is a question that is difficult to answer in an absolute sense. But what can be said with certainty is that by 1993, Korea was no longer a developing country (where return on capital for almost any undertaking would by high) but rather was rapidly becoming an advanced country in which rates of return on capital almost surely were, at the margin, diminishing. Thus, conditions were such that the risks of debt financing were rising.[12] Indeed, this danger had been recognized by

11. Assuming that the marginal return on that capital exceeds the after-tax cost of the debt!

12. Hsieh (1997) has econometrically estimated trends in the real rental price of capital in Korea between 1966 and 1990; he finds that this price has declined at an average annual rate of –5.3 percent over that time. The real rental price of capital is the marginal product on capital, and this decline indicates a falling rate of return on capital.

the Chun regime 10 years earlier, when efforts had been made to force the chaebol to reduce leverage.

Furthermore, as the chaebol grew during the 1980s and 1990s, it became a common practice for one affiliate within a group to guarantee the debt of other affiliates. Under some circumstances, this might have been rational. For example, a group might have wanted to enter a new undertaking with expected positive return but where entry was subject to considerable start-up risk—that is, uncertainties were such that there was significant probability that costs might be larger than expected or revenues lower than expected. In such a case, even if the expected rate of return on the undertaking was positive, the variance around this positive expectation would be large. Thus, risk of bankruptcy might be significant even if expected returns were positive. Under these circumstances, a guarantee by a subsidiary in the same group acting as a cash cow might have been required by banks as a condition for loans to the new undertaking. In effect, the guarantee was a financial option by which the banks mitigated bankruptcy risk by transferring it to owners.[13]

From the owner's point of view, this could be perfectly rational. Theory and empirical evidence suggest that a rational decision maker's (or investor's) aversion to risk should decrease as a function of the net wealth of the decision maker or, equivalently, that willingness to take risks should increase with the wealth of the decision makers.[14] The reasoning is simple: given a choice as to whether to commit a sum of money to a risky undertaking where that sum is a significant portion of the decision maker's net worth, the decision maker might be well advised to walk away from the undertaking, even if the expected value of the undertaking is positive, because an unfavorable outcome would be ruinous even if the probability of such an outcome is low.

But, by contrast, if the decision maker were to have a higher net worth, so that failure would not be ruinous, then he or she is better placed to take a chance on the favorable outcome. Thus, by this reasoning, as the chaebol and their owners accumulated wealth, they indeed should have become more willing to take risks that were not subject to any sort of government guarantee, a conclusion that in turn suggests that cross-guarantees could be useful instruments. This willingness should nonetheless have been bounded; chaebol owners should have been willing to take risks on new undertakings where the probabilities favored outcomes that would increase the wealth of the group and owner, but not have been willing to

13. This option can create a problem of moral hazard, as explained later in this chapter. Banks might, if given such guarantees, advance loans to projects that are fundamentally unsound.

14. The classic work expounding both the theory and empirical evidence pertaining to the relationship between wealth and a decision maker's risk aversion is Raiffa and Schlaiffer (1968).

enter into undertakings that risked bankrupting the whole group. In fact, however, the owners did take such risks—for example, by using listed affiliates to guarantee loans of riskier unlisted affiliates. The effect was to transfer risk from the owners to minority shareholders of the listed affiliates, while ensuring that these minority shareholders did not share in the returns of the unlisted affiliates, when and if such returns were realized (see Friedman, Johnson, and Mitton 2002).

In practice, this bound often seemed to be ignored. Yoon Bong-joon (1998) argues that debt guarantees became so pervasive that if any affiliate of a chaebol were to have become bankrupt, the whole group would be in danger of being brought down by that bankruptcy. One consequence was that as bankruptcy risks mounted during the 1990s, the banks in some cases made what were in effect policy loans to weak affiliates of chaebol, fearing that if these weren't advanced, the whole of the loans to the chaebol were at risk and not simply the loans of the weak affiliates. Moreover, the banks in Korea were thus "evergreening" their loans to at least some chaebol affiliates (Krueger and Yoo 2001, 2002): that is, the banks were advancing loans where the proceeds were used for nothing more than paying debt-servicing charges. In effect, the subsidiary was "borrowing from Peter to pay Paul" or, even more accurately, "borrowing from Peter to pay Peter." In the aftermath of the 1997 crisis, the difference between a sound and a shaky group (e.g., between Samsung and Hyundai) was which dominated in the ensemble, the weak subsidiaries or the strong.

According to published statistics, the major chaebol did not actually increase their debt-to-equity ratios during the 1990s, but they maintained this ratio at levels that were very high by international standards while they continued to expand their operations. The average debt-to-equity ratio for the top 30 groups in 1989 was 4.21; this average rose slightly to 4.26 in 1993 but fell to 3.97 in 1994, according to KFTC reports. Moreover, there might have been additional debt in some of the groups that went unreported, so these figures may understate the true average ratios. Because the groups did expand, total debt held by them also expanded. According to KFTC data, the gross assets of the top 30 groups were 96.7 trillion won at the end of 1990; but these assets grew by more than 50 percent, to 156.7 trillion won, by the end of 1992 and to 199.5 trillion won by the end of 1994. By the time the crisis hit in 1997, the gross assets of these groups totaled 348.4 trillion won. Apparently, the chairmen of the chaebol figured that they could expand via debt financing indefinitely.

Thus, when Kim Young-sam was elected president in 1992, taking office in 1993, there was in fact a mounting problem in Korea: major business groups, already highly leveraged, were taking no steps to reduce their leverage but indeed were continuing to expand, with the result that rates of return on capital were almost surely, at the margin, diminishing. The clear implication was that the bankruptcy risk of the chaebol was, with time, rising. From the perspective of hindsight, this should have been seen as a major problem. But in 1993, it was a problem that few leaders in Korea took very seriously.

Why did the banks allow this to happen? The answer to this question does not seem to be, as some observers have suggested, that the banks were too small to be able to stand up to their borrowers. Stijn Claessens (1999) argues that the banking system in Korea was in fact quite concentrated, with six large banks controlling more than 50 percent of banking assets. Assets of each of these banks accounted for 10 percent or more of GDP; in other OECD nations, the very largest of banks has assets equal to no more than 5 percent of GDP.

One answer might simply be "habit." After all, by the mid-1980s the banks had been lending, massively, to the large chaebol for more than 15 years at the direction of the government. The accumulated experience of doing so was not wholly positive; loans often did go bad, and from the 1970s onward Korea's banks held significant portfolios of nonperforming loans. Rather than being cleaned up, the bad loans were kept on the books for years; and in the 1990s, those loans that should have been classified as nonperforming began to rise markedly.[15] For many Korean banks, revenues from banking barely covered costs because of interest rate regulation.[16] Bank owners might therefore have been expected to demand better performance from the banks, and policy reforms that would enable better performance. However, because the law prohibited any one shareholder from holding more than 4 percent of the equity of the bank, and because shareholders were not well organized, there was no strong constituency on the shareholders' side demanding either better performance or policy reform.

Furthermore, bank presidents and other top executives were appointed by the government and not by shareholders. As a result, according to Kim Dae-jung (1996, 100), "bank officers are not evaluated objectively—according to their managerial performance—but by their demonstrated sycophancy with government officials." Supporting the notion that habit figured in the behavior of Korean banks, and that there was very little incentive for them to improve themselves, is evidence that Korea's banks experienced *negative* total factor productivity growth during the 1980s

15. According to Kim Dae-jung (1996, table 8.1), the percentage of "abnormal" loans—i.e., those that probably should have been considered nonperforming or at least highly problematic but were carried on the books as though they were performing—was upwards of 25 percent of the total loans of the eight largest Korean banks even in 1988; the loans actually carried as "nonperforming" constituted 5.7 percent of all loans of these banks, a figure that was little changed as late as fall 1997.

16. To compensate for their losses, banks received special loans (at 3 percent nominal interest rates).

and 1990s (Nam 1999): that is, the output of the banks per unit of input actually declined.

But habit alone, however, does not satisfactorily explain the banks' behavior; after all, we are still left wondering how the bad habits began. To answer this last question, considerations of "moral hazard" must be introduced.[17] In the context of the banks in Korea (as well as elsewhere in the recent international finance literature), the idea of moral hazard is as follows: a bank or other financial institution makes loans to projects where the risk of default is unacceptably high, except that there exists a contract (which itself may or may not be "hidden") with the government to the effect that the government will bail the bank out in the event of default. If such a contract exists, the banks hold what amounts to a financial option that is given to them free of charge. If the loan proves to be performing, the bank collects the interest and other fees and eventually is repaid the principal. If the loan proves to be nonperforming, the bank recovers the principal. Thus, default risk is transferred to the government. Such an option, because it is granted free of charge but has value, is a government subsidy.[18] Like any subsidy, it can distort outcomes, because funds flow to projects subject to the subsidy, and these projects might not represent the best available use of the funds. In this context, the "moral hazard" is essentially the perverse incentive that is created by the implicit contract (or option) that gives rise to the implicit subsidy.

Closely related to this notion is the idea of being "too big to fail." Some firms or groups of firms might be deemed too big and important to fail, because failure would generate substantial unemployment and other undesirable outcomes that the government would prefer to avoid. Fear of contagion also played into this scenario: if one big group were to fail, others might follow. "Too big to fail" creates a problem of moral hazard if banks believe that the firms that are too big to be allowed to fail by the government are those that will be bailed out in the event of bankruptcy. The government thus gives the firm an implicit insurance policy against bankruptcy, at no cost to the firms' owners. Effectively, the bankruptcy risk is passed on to society at large—the risk is "socialized."

Danny Leipziger (1998) notes that moral hazard as specific to Korea manifests itself in the propensity of Korean economic agents to take on undue amounts of risk on the expectation that losses, if these are actually realized, will be covered by someone else (i.e., the state).[19] We have seen

17. The classical work on moral hazard is Arrow (1964); see Guesnerie (1992) for a survey of the theory of moral hazard.

18. Note that this option is not the same as that created by a loan guarantee by another member of the same group, as discussed in the previous section.

19. Krugman (1998) offers a theory of how moral hazard as described here caused overinvestment in Asia.

that this is not quite true: during the 1960s, failure to achieve export performance resulted (in some cases at least) in withdrawal of subsidies and almost certain failure for a firm (there was no socialization of risk); and even during the 1970s the equity investment by entrepreneurs in firms that became "unsound" was lost (though arguably, because the state granted preferential credits to these firms, the state held a quasi-equity position in them and could be seen as enacting partial socialization of risk). Nonetheless, there arose during the HCI period something like a "too big to fail" doctrine that took the following form: If a venture was undertaken but failed, it would be transferred under government management from one owner to some other owner (usually one, it would seem, in special favor with the Korean administration), thereby ensuring that the liabilities of the original owner were limited (i.e., that owner would not be liable for shutdown costs of the undertaking). The hope, of course, was that the new owner could turn the undertaking around and make it profitable.

At the time of the HCI drive, such a doctrine may have made a modicum of sense. The risks that the government was then seeking for entrepreneurs to take were large relative to the wealth of the entrepreneurs (or, in other words, the risks were such that entrepreneurs who undertook large undertakings and failed stood to lose everything). Thus, by implementing the "too big to fail" doctrine as described above, and socializing bankruptcy risk, the disincentive to risk-taking created by wealth constraints was removed (or made less binding).

The problem is that this doctrine remained in place long after it ceased to be relevant. Thus, both firms and banks in Korea behaved as though such a doctrine was in force in the 1980s and 1990s, right up until the crisis broke out. But by the late 1980s, whatever rationale it might have enjoyed earlier had ceased to exist. All of the top 30 groups in Korea—and certainly the top 5—had amassed huge amounts of assets, and these firms should have been able to underwrite reasonable risks of entering new activities without any need for government assistance, implicit or otherwise.

All said, then, the banks in Korea simply did not play the roles that financial institutions are supposed to play in modern market economies—to act to efficiently allocate resources via loan decisions and to effectively monitor the performance of borrowers. In particular, Korean banks seemed to have neither the will nor capacity to take corrective action when poor performance might have warranted such action. They did not develop the analytical skills (e.g., those of credit and risk analysis) needed to properly evaluate and monitor firms to which they lent, relying instead on government guidance. Relative to Korean industry, Korean banks and other financial institutions were simply underdeveloped. Indeed, one of the failings of early industrial policy was a failure by government leaders, especially the military leaders, to realize that a modern and efficient financial sector is as important, or is indeed more important, than a modern and efficient steelmaking industry or even information technology sector.[20] Had this fact been fully recognized, Korea might have developed its financial sector the same way it developed its industrial sector, taking care to learn what is best practice, to master this practice, and to take steps to ensure that Korean bankers and other financial executives were as well trained and well motivated as its engineers. But this was not the course that Korea took.[21]

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20. In recent years, in fact, a powerful literature has emerged indicating that the level of development of the financial sector of a nation is correlated closely with measures of economic performance, including growth. Given the relative underdevelopment of the financial sector in Korea and the high growth rate, Korea must be something of an outlier in this regard: i.e., Korea's economic performance seems to have occurred in spite of the underdevelopment of the financial sector. For reviews of the relevant literature, see Levine (1997) and Levine and Zervos (1998).

21. As Cargill (1999) points out, the Korean government was urged for years by the World Bank and other outside advisors to pay more attention to developing a strong and effective financial sector. Many of Korea's top economic leaders recognized that this should be a priority. It was the leaders at the very top who were deaf to this advice. And, of course, as already observed, there were powerful constituencies in Korea whose interests were to make sure that the advice went unheeded. See also Noland (1996).