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STRUCTURAL WEAKNESSES OF THE KOREAN *CHAEBOL*:

MORAL HAZARD AND THE KOREAN FINANCIAL CRISIS

by

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ABSTRACT

The Korean financial crisis in 1997 must be seen in light of the structural weaknesses of Korean businesses, which developed with the Korean economy for decades. Since the early 1960s, large Korean business conglomerates (*Chaebols*) have played an essential role in the process of rapid economic development. *Chaebols* expanded dramatically, pooling scarce resources such as entrepreneurship, capital and technologies as well as business risk through cross-subsidization among the subsidiaries. However, *Chaebol* growth occurred on a very shaky base, critically vulnerable to external shocks. The *Chaebol's* structural weaknesses include high corporate leverage, investment inefficiency and extensive diversification strategy resulting low profitability and productivity.

The moral hazard of the *Chaebol* resulted from their expectation that the government would not let these large Korean business conglomerates go bankrupt. As a result, large *Chaebols* were considered 'too big to fail'. This belief was nurtured through the government's extensive intervention in the financial sector, bailout packages for ailing industries as well as industrial targeting and other promotion policies. Thus this study examines the structural weaknesses of the *Chaebols* in the context of the moral hazard, which is the core of the Korean financial crisis.

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I. Introduction

1.1 Background

During the past several decades, the rapid economic development of South Korea (Korea hereafter) has attracted worldwide attention. The country's rapid economic growth has been cited as an exemplary model of successful economic development and termed an economic miracle (World Bank, 1993). Indeed, Korea's growth performance was remarkable; its nominal Gross National Product (GNP) per capita increased by more than 120 times, from less than US$ 80 in 1960 to US$ 10,543 in 1996 (Bank of Korea, 1998). As a result of this dramatic economic development, Korea joined the Organization for Economic Cooperation and Development (OECD) in October 1996, becoming the second Asian member after Japan.

The impact of the Asian financial crisis, however, starting with the plunge of the Thai *Baht* early in July 1997, was dramatically reflected in the Korean currency market at the end of 1997. The Korean *Won* dropped 50 percent in value between the end of 1996 and the end of 1997. This financial crisis quickly degenerated into a full economic crisis. Real Gross Domestic Product (GDP) growth plunged following the fourth quarter of 1997, and remained negative throughout 1998 (See Table I-1). In particular, private consumption and fixed investment declined dramatically, mainly due to a severe credit crunch as well as increased market uncertainty. Reflecting both this dire growth performance as well as the fallout of economic restructuring, the unemployment rate sharply rose to over seven percent in 1998, up from a pre-crisis level of two percent. Stagnant domestic demand worked as the major contributing factor to the improved current account as it reduced import demand dramatically. In addition, dramatic devaluation of the domestic currency after the crisis increased consumer price inflation to 7.5 percent in 1998, from 4.5 percent in 1997.

<Table I-1> Recent Trends in Key Macroeconomic Indicators

(year on year growth rates, percent)

	1994	1995	1996	1997	1998
Gross Domestic Product	8.6	8.9	7.1	5.5	- 6.8
Private consumption	7.6	8.3	6.8	3.1	- 12.0
Fixed Investment	11.8	11.7	7.1	- 3.5	- 29.3
Exports	16.5	24.0	13.0	23.6	8.9
Imports	21.7	22.0	14.8	3.8	- 20.9
Current Account (US$ 100million)	- 39	- 85	-230	- 82	97
Unemployment	2.4	2.0	2.0	2.6	7.4
Dishonoured Bill Ratio	0.17	0.20	0.17	0.52	0.55

Source: National Statistical Office: Quoted in Nam et al (1999, p.4).

As a consequence of this disastrous economic situation, the Korean government turned to the International Monetary Fund (IMF) to request bailout loans on November 21, 1997. A request by the government for a financial aid package from the IMF amounting to about US$ 57 billion[1], the largest in IMF's history, was approved on December 3, 1997. This initial program required tight macroeconomic as well as comprehensive adjustments in the corporate and financial sector, including the suspension of nine insolvent merchant banks.[2]

Why did Korea find itself in both currency and financial crises? The Korean financial crisis was initiated by a series of large-scale corporate bankruptcies, starting with Hanbo Group in early 1997. For a decade preceding this crisis, none of the 30 largest Korean conglomerates (*Chaebols*[3]) had gone bankrupt, convincing *Chaebol* owners and international investors that they were 'too big to fail'. Therefore, these massive corporate failures were shocking in Korea. At least ten of the 30 largest Korean conglomerates ran into serious liquidity problems before the currency crisis hit the country in late 1997 (See Table I-2).

[1] US$ 21 billion from the IMF, US$ 10 billion from the World Bank, US$ 4 billion from the Asian Development Bank, and the rest from bilateral loans (Corsetti et al, 1998).

[2] For more details, see Corsetti et al, "What caused the Asian currency and financial crisis? Part II: The Policy Debate" Table 58, 1998.

[3] See definition at the end of this chapter.

<Table I-2> Cases of Bankruptcies in the 30 Largest *Chaebols*

Chaebol	Forms of Bankruptcy	Date Bankrupt	Chaebol	Forms of Bankruptcy	Date Bankrupt
Woo-Seong	C.A.	96-1-19	**Hanshin**	C.A.	97-5-31
Dong-Ah	S.L.	97-1-10	**Kia**	C.A.	97-7-18
Hanbo	C.A.	97-1-28	**Dae-Nong**	S.L. / C.A.	97-9-11
Jinro	S.L. / C.A.	97-3-20	**Ssang-Bang-Ul**	S.L. / C.A.	97-10-20
Sammi	C.A.	97-3-20	**Haitai**	C.A.	97-11-1

Note: 1) S.L. means "Cooperative Syndicated Loans", which is to give emergency loans for the de facto bankrupt firms in the form of syndicated loans by the involved banks. In some cases, the initial S.L. led to the C.A. latter. In other words, the cases are often mixed.
2) C.A. means "Court Administration". Firms that are assessed to be hopeless even with cooperative syndicated loans were directly subject to court administration.
3) All firms belong to the 30 *Chaebols* in terms of the asset values as of the end of 1996, assessed by the Bank Supervision Authority of Korea.
Source: Bank of Korea, 1999: Quoted in Lee (1999, p.14).

These series of large corporate insolvencies inevitably undermined the soundness of domestic financial institutions (See Table I-3). Non-performing loans (NPLs) of commercial banks as of the end of 1996 stood at 12.2 trillion *Won*, which is 3.9 percent of the total credit. These bad loans almost doubled to 21.9 trillion *Won* in the next nine months to September 1997. At the same time, merchant-banking corporations – whose functions are broadly similar to those of commercial banks – recorded NPLs of 3.9 trillion *Won* at the end of September 1997, three times larger than the 1.3 trillion *Won* recorded at the end of 1996.

<Table I-3 > Non-performing Loans in Korean Financial Institutions

(trillion *Won*, percent)

	1996	Jun. 1997	Sep. 1997
Commercial Banks	12.2	19.2	21.9
	(3.9)	(5.8)	(6.4)
Merchant Banking Corporations	1.3	3.6	3.9
	N/A	N/A	(2.9)
Total	13.5	22.8	25.8

Note: end of period, figures in parentheses indicates ratios to total credit.
Source: Bank of Korea, 1998. p.20-21

These massive corporate bankruptcies, followed by the domestic financial institutions' insolvency problems, severely undermined international investors' confidence. Moreover, Korea was a victim of a financial epidemic originating from Southeast Asia, as the financial crisis in Thailand and Indonesia shifted the negative market sentiment on to other Asian economies. This financial crisis in Thailand and Indonesia made international bankers and investors more closely examine any potential risks in Asian markets. In Korea, Ahn (1999) argues that (besides an aggravated corporate profitability and liquidity squeeze) international bankers and investors found a lack of transparency in foreign debt and foreign exchange reserve situations as well as unreliable corporate accounting standards and disclosure practices. These weaknesses were well known to international bankers and investors even before the crisis, but were overlooked in their belief that Korean *Chaebols* and banks would not go bankrupt. Nam et al (1999) argue that a sudden shift in international creditors confidence in Korean firms and financial institutions occurred, prompting these investors to leave the market by cashing their investment and refusing to roll over their short-term lending, which directly triggered the Korean financial crisis (See Table I-4).

<Table I-4> Inflows and Outflows of Foreign Portfolio Investment in Korea

(US$ billion)

	1992	1993	1994	1995	1996	1997	1998
Inflow	0.7	1.9	8.6	10.0	12.4	12.6	0.8
Outflow (-)	2.0	5.7	6.6	7.8	8.0	11.8	3.3
Net Inflow	2.7	8.6	2.0	2.2	4.4	0.8	- 2.5

Source: Bank of Korea, Monthly Bulletin, Various years.

Many theories have been offered to explain the causes of the Asian financial crisis in 1997. Broadly speaking, however, there are two dominant and contrasting streams of thought

describing the origin of the Asian financial crisis. One approach, financial panic theory, focuses on external factors — such as the self-fulfilling panic of foreign investors — to interpret the cause of the Asian financial crisis. An alternative explanation, moral hazard[4] theory, emphasizes internal factors — such as the fundamental weakness of the corporate and banking sectors — to portray the origin of the crisis. Nevertheless, it is important to note that singling out one or two causes inadequately explains the financial crisis. Similarly, it is difficult to indicate the relative importance of different crisis causing factors (Lee, 1998). A balanced explanation of the Korean financial crisis considers both the sudden reversal of foreign capital flows (external factor) and the subsequent illiquidity of the corporate sector and financial institutions (internal factor) simultaneously since they are deeply inter-related.

The fundamental aspect of the Korean financial crisis, however, lies in the *Chaebol's* many moral hazard-driven structural weaknesses, which developed with the Korean economy for decades. It is true that international investors' panicky behavior triggered the financial crisis. Nevertheless, without the domestic problem of moral hazard, the crisis could have been avoided. Regardless of the external circumstances, the economy had a serious moral hazard problem, which was potentially vulnerable to any kind of external shock. In other words, the moral hazard was a built-in potential explosive; external circumstances, the irrational panic of foreign investors, lit its fuse.

The purpose of this study is, therefore, to argue that the moral hazard-driven structural weaknesses of the *Chaebols*, which developed with the Korean economy, are the fundamentals of the Korean financial crisis. Krugman's (1998) moral hazard approach will provide a theoretical background for this study. However, since Krugman's argument tends to generalize

[4] See definition at the latter section of this chapter.

the cause of the Asian crisis by focusing too much on moral hazard, this study will attempt to examine the unique causes of the Korean crisis by analyzing the structural weakness of the *Chaebol* in the context of moral hazard. Thus this study's biggest contribution is its holistic interpretation of the Korean crisis in the context of moral hazard. By examining the structural weaknesses of the *Chaebol*, driven by the moral hazard, this study will demonstrate that *Chaebol*s were already on the path to an economic turmoil years before the actual financial crisis hit the country. The *Chaebol*s' four moral hazard-driven flaws, which eventually triggered the Korean crisis, were: investment inefficiency; high indebtedness; extensive diversification; resulting low productivity and profitability.

The central concepts, *Chaebol* and moral hazard, and the characteristics of the Korean *Chaebol* in comparison to the Japanese *Zaibatsu* are briefly addressed in the latter section of this chapter. Following the introduction, Chapter 2 addresses the influence of political factors on Korean economic development in a historical context to reveal the cause of the financial crisis. Chapter 3 reviews the two dominant theories interpreting the Asian financial crisis. By doing so, this chapter will show how the moral hazard theory explains the fundamental aspect of the Korean financial crisis. Chapter 4 reviews the moral hazard-driven structural weaknesses of the Korean *Chaebol* uncovering the fundamental cause of the Korean financial crisis. Among many possible factors, this study focuses on four major problems that many scholars deem significant[5]. This study will prove that these four major problems are caused by moral hazard in the corporate sector. Finally, various trends and conclusions drawn from this study will be summarized in Chapter 5.

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[5] For example, see Hwang, I., (2000), "Diversification and Restructuring of the Korea Business Groups" for the extensive diversification strategy of the *Chaebol*.

Before addressing the two central concepts and characteristics of the *Chaebol* in comparison to the Japanese *Zaibatsu*, a key limitation of this study must be acknowledged. Due to the complexity of the Asian financial crisis, it is difficult to find a general explanatory theory. Obviously, each affected Asian country uniquely faced the crisis because of their different economic situations[6]. This study, however, concentrates on the internal problems of the *Chaebol*; if I were to extend my analysis, it would be useful to look at the structure and efficiency of the *Chaebol* in a comparative context, while this study provides some comparative data – specifically, an International Comparison of the Average Debt/Equity Ratios – more comprehensive relative data (including a wider range of *Chaebol's* efficiency indicators in a comparison to other countries' business corporations) would be required for such research. This is an area for further study. Instead of trying to find a general cause (or causes) of the Asian financial crisis, this thesis descriptively focuses on Korea, revealing the country's unique causes of the crisis. My conclusion is, therefore, restricted to the Korean context.

[6] For example, Thailand incurred a US$ 144 billion trade deficit before the crisis, while Taiwan recorded a US$ 100 billion trade surplus during the same period. In terms of the impact of the crisis, Indonesia's annual real GDP growth rate was negative 15.0 percent in 1998, while Singapore recorded 0.0 percent real GDP growth in the same year. Besides, although the crisis hit almost every country in the region, not all Asian countries were affected by the crisis. Regarding the annual average growth rate of real GDP of China and Taiwan, they were hardly affected by the crisis. China and Taiwan's real GDP growth rate was 5.5 and 5.0 percent respectfully in 1998 (Asian Development Bank, 1999).

1.2 Conceptual Framework

Chaebol

In the academic arena, several definitions of *Chaebol* are available. Kang (1995, p3) defines *Chaebol* as "a group of firms that has emerged during rapid economic development, which is largely controlled by the owner and the family members, and is working in many diversified business areas." Similarly, Kim (1997, p51) defines *Chaebol* as "family-owned and family-managed large business groups, which formed a tight alliance with the Korean government and spearheaded its rapid economic growth based on exports." Jones and Sakong (1980) define *Chaebol* as a family-controlled organization managed centrally through a holding company. The organization is a business group managed by the owner and his family with business diversification. The business group is heavily dependent on outside money and pursues growth through its export drive and its close relations with government. Besides these academic definitions, there is a technical meaning of *Chaebol* for the purpose of government regulation and empirical studies. According to Lee (1999, p3), the Korean Fair Trade Commissions (KFTC) legally define *Chaebol* as "a group of companies, more than 30 percent of whose shares are owned by some individuals or by companies controlled by those individuals."

Although the definitions of *Chaebol* are slightly different from one another, some common elements emerge from these various definitions including: large business group structures; family control and ownership; diversified management in conduct; and government support in environment (Lee, 1999). Therefore, this study will define *Chaebol* as a large, diversified business group that is managed by the owner and his family members, and has grown under the active support of the government. The terms, companies or subsidiaries will be interchangeably used to refer to individual firms belonging to a business group, *Chaebol*.

Moral Hazard

The term moral hazard originated from the insurance sector. Bannock et al. (1992, p295) define moral hazard as "presence of incentives for individuals to act in ways that incur costs that they do not have to bear" which is a typical case for insurance. For instance, once someone has insured their house against burglary they do not have the incentive to be careful to protect their property. Therefore, the tendency of insured people to take more risks or use more of the service is the subject of the moral hazard.

This narrow definition of moral hazard, according to Leipziger (1998, p1), refers to "actions of economic agents maximizing their own utility to the detriment of others in situation where they do not bear the full consequences of their actions because of uncertainty, incomplete information or the nature of the particular contract in force". Some economists, such as Krugman (1998), argue that the Asian financial crisis was led by moral hazard. They argue that corporations, financial institutions and foreign investors sought to profit by building, financing or serving targeted industries, while believing they were protected by government, at least to some extent, from loss[7]. In the case of Korea, *Chaebol*s over-invested and domestic/international banks over-lent because all assumed that if crisis struck, the government would bail them out. In other words, it was believed that *Chaebol*s were always backed by the government due to its concern with the socioeconomic impact of any failure within the big conglomerates. In this study, therefore, moral hazard is used to indicate the *Chaebol*s' and domestic/international financial institutions' mind-set that they are somehow protected from loss by governments if things go wrong.

[7] Corsetti et al (1998) postulate three different kinds of strictly interrelated moral hazards: corporate, financial and international level. For more details, see Corsetti et al, "What caused the Asian currency and financial crisis? Part II: The policy debate", 1998.

1.3 Characteristics of the *Chaebol* in Comparison to the Japanese *Zaibatsu*

The Korean *Chaebol* shared many features with the pre-World War II Japanese *Zaibatsu* model. First, the *Chaebol* and the *Zaibatsu* are both family-owned and family-managed. Majority shares in the various enterprises are held by the chairman and his immediate relatives. Second, their business diversified into a wide range of unrelated sectors. In Japan, the large *Zaibatsu* were prominent in industrial manufacturing as well as in banking. In Korea, the large *Chaebol* have also diversified into unrelated sectors in manufacturing and service, except banks.

On the other hand, according to Kim (1997), there are two significant differences between the *Chaebol* and the *Zaibatsu*. First, the *Chaebols* do not own banks. In Korea, banks were nationalised by President Park in 1961, even after privatization in the early 1980s, and the *Chaebol* were prohibited from owning majority share in banks. The nationalisation of banks in Korea by President Park in 1961 assured more room for state intervention in the market, since the *Chaebol* had to rely on the state for domestic loan capital. Unlike the *Zaibatsu*, therefore, the relationship between the government and the *Chaebol* was vertical rather than equal. Second, despite the prohibition of the *Chaebol* from owning banks, the government actively supported the *Chaebol's* expansion. The state provided so-called 'policy loans' targeted for export firms dominated by the large *Chaebols*. Thus, unlike Japan, the largest share of export products is manufactured by large companies that are members of the *Chaebol*.

In further comparison, according to Kang (1995), the Japanese government usually supported the *Zaibatsu* only after they survived in the severe internal competition of the free market. Thus, the *Zaibatsu* had already developed high technological and managerial skills through internal competitions and had garnered support from the government. In this situation, *Zaibatsus* could be autonomous in their economic ventures even when cooperating with the state.

II. Korea's Development Strategy and *Chaebols*: An Overview

This chapter explores the influence of political factors on Korean economic development in a historical context to reveal the root of the financial crisis in Korea. Korea's rapid economic development since the 1960s, based on export-oriented industrialization, has been hailed as one of the Third World's most successful such cases. During 1962-1991, the Korean economy expanded an average annual rate of nearly nine percent (Sakong, 1993). Nominal per capita GNP during the period grew from US$ 87in 1962 to US$ 6,498 in 1991, with real per capita GNP increasing nearly eightfold (See Table II-1). At the same time, the proportion of GDP originating from the mining and manufacturing sectors increased from 16.4 percent in 1962 to 27.9 percent in 1991. Commodity exports rose from US$ 54.8 million in 1961 to US$ 71.9 billion in 1991, making Korea one of the world's major trading partners.

<Table II-1> Economic Structure of Korea, 1962-1991

	1962	1972	1977	1987	1991
GNP (Current US$ Billion)	2.3	10.7	36.8	128.9	280.9
Per capita income					
Current US$	87	319	1,012	3,110	6,498
Thousands of Korean *Won**	423	850	1,269	2,403	3,273
Export					
Percentage of GNP	2.4	15.0	27.2	36.7	25.6
Millions of current US$)	54.8	1,624.1	10,046.5	47,280.9	71,870.1
Import					
Percentage of GNP	18.3	23.6	29.4	31.8	29.0
Millions of current US$	421.8	2,522.0	10,810.5	41,019.8	81,524.9
Industrial Structure (%)					
Agriculture, forestry and fishing	37.0	26.8	22.4	10.5	8.1
Mining and manufacturing	16.4	23.5	28.9	33.0	27.9
Other	46.6	49.7	48.7	56.5	64.0
Unemployment (%)	8.2	4.5	3.8	3.1	2.6

Note: * 1985 constant

Source: Bank of Korea, "Economic Statistics Yearbook", various years: Quoted in Saknog (1993, p.8).

This rapid industrialization of Korea during the last three decades was primarily due to strong authoritarian government intervention in business activities through planning the country's economic direction, selecting strategic industries, and allocating/distributing capital. This strong government intervention in the private sector, however, created a close government-business relationship, which eventually caused the moral hazard problem in the Korean economy.

Recent Korean government development strategy has favoured the expansion of a few large *Chaebols*. The government's price control and exchange rate control, allocation of foreign capital to some large export-oriented companies with low interest rates, and special favours and subsidies for businesses, together with the high rate of chronic internal inflation, increased the fortune of a few large *Chaebols* (Kim, 1997). In this way, the government played the dominant role in promoting economic venture in the business sector, while private enterprises expanded their wealth rapidly under the government's favour and subsidies.

The development process of the Korean economy, therefore, cannot be explained without understanding the development policy of the government in relation to the *Chaebol*. In light of this situation, it is meaningful to divide the period of *Chaebol* development process according to the change in political regimes. The development processes of *Chaebol* can be divided into four periods: the Korean emancipation to the end of Second Republic (1945-1961); the military coup in 1961 to the end of the Third Republic (1961-1972); the *Yushin* government (1972-1979); finally the Fifth Republic (1980-1987). In addition, the financial liberalisation of Korea in the 1990s will be briefly addressed in the latter section of this chapter.

2.1 Rhee's Regime – The First and Second Republic (1945-1961)

Korea has been involved in the world economy since the country's emancipation from Japanese colonial rule in 1945. However, real industrial development began after the Korean War (1950-1953). During 1953-1957, for example, GNP in real terms grew at about 5 percent per year (Jones and Sakong, 1980). In this period, foreign aid from the West (especially from the U.S.) was an important source of funds for the reconstruction and rehabilitation of the economy. For example, more than 70 percent of imports were financed by foreign aid during the reconstruction period of 1953-1960, indicating how dependent the Korean economy was on foreign aid (Sakong, 1993).

Through the reconstruction boom in this period, many of the current *Chaebols* accumulated capital. Among the 50 largest *Chaebols* ranked by sales in 1984, 70 percent (35 *Chaebols*) were established during 1945-1960 (See Table II-2).

<Table II-2> Year of Establishment of the 50 Largest *Chaebols* in 1984

	-1945	1946-1960	1961-1971	1972-1979	1980-1984
Top 10	1	8	1	0	0
Top 11-20	2	5	2	1	0
Top 21-30	1	9	0	0	0
Top 31-40	1	6	3	0	0
Top 41-50	0	7	2	1	0
Total	5	35	8	2	0

Source: Daily Economic Newspaper Co. 1986: Quoted in Kim (1997, p.24).

In this period, a group of entrepreneurs rapidly grew up as large capitalists, with both political favors and government subsidies, by increasing their connections with some powerful bureaucrats and/or politicians rather than investing in the development of productive industries. The role of government remained essentially a mechanism to create a few large entrepreneurs

who accumulated capital with illicit fortune by gaining more political favours and subsidies. Therefore, the close relationship of these large capitalists with the government was one of the most important sources for early capital accumulation. This paved the way towards the rise of first top 10 *Chaebols* during the 1950s (Jones and Sakong, 1980).

In summary, throughout this period, social stability mostly rested on foreign aid. At the same time, the government played an important role in the initiation and development of modern entrepreneurial elites (or capitalists) by arranging and distributing resources in the form of foreign aid from the West, especially from the U.S. Given the government's lack of focus toward economic activities, the *Chaebol* had relative freedom in their economic activities as long as they had familiar connections with government officials. Thus, from the initial period of Korean industrialization in the 1950s, the development of *Chaebols* depended highly on their connection with politicians and/or government bureaucrats.

2.2 Park's Regime – The Third Republic (1961-1972)

The government-business relationship entered into a new era after the military coup on May 16, 1961. The passage of 'A Law for dealing with Illicit Wealth Accumulation' prescribed the further relationship between the government and *Chaebols* in the 1960s (Jones and Sakong, 1980). Park's regime demonstrated its power to the private sector with charges of illicit accumulation of wealth. As a result, most former *Chaebol* founders were arrested and threatened with confiscation of their assets. These charges were meant to bring a clean sweep of both the government and the businesses. According to Kim (1997), however, the basic pattern of close government-business relationships was set at this time, and the business community was subordinated to the government through the 1960s and thereafter.

In Park's regime, one of the most important means of controlling the business sector was financial monopolization. Monopolization of domestic capital was achieved by nationalizing all Korean private banks in October 1961. Kim (1997) argues that these nationalized banks were used by the Park government as a carrot to attract private businesses to conform to the state's directives in the economy and as a stick to punish those that did not follow by threatening a withdrawal of capital assistance. So-called 'policy loans' were offered to *Chaebols* at an interest rate substantially lower than regular banks loans (See Table II-3).

<Table II-3> Major Interest Rates on Loans and Discounts of the Commercial Banks

(percent per annum)

Effective Year	Discount on Bills	Loans for Exports	Loans on Other Bills
1964	14.0	8.0	16.0
1965	24.0	6.5	26.0
1967	24.0	6.0	26.0
1968	26.0	6.0	25.2
1971	22.0	6.0	22.0-23.0
1972	15.0	6.0	15.5-16.5
1974	15.5	9.0	15.5
1976	17.0-18.0	8.0	17.0-19.0
1978	18.5-19.0	9.0	18.5-20.5
1981	16.5-20.5	15.0	16.5-22.5
1982	10.0	10.0	10.0
1983	10.0-11.5	10.0	10.0-11.5
1984	10.0-11.5	10.0	10.0-11.5
1985	10.0-11.5	10.0	10.0-13.0

Source: Economic Statistics Yearbook, Bank of Korea: Quoted in Sakong (1993, p.34).

Foreign capital, the most important source of capital in the 1960s, was also put under the government's strict control. Since there was very little accumulation of domestic capital, it was necessary to borrow capital from other countries to pursue economic development. However, the government sought foreign capital in which the responsibility of distribution and management was in the hands of the borrower. Thus, the government's financial monopolization

established a centrally managed and powerful set of instruments to carry out the government's industrialization policies.

In the 1960s, the economy took off due to the government's efforts to earn public support and political legitimacy by promoting economic development via an export-led growth strategy. The government believed that developing an outward-oriented economy, with growth as the top priority, would not only promote growth but also lay the foundation for enhancing equity and a faired income distribution. The government also believed that export-led growth and industrialization, financed by foreign debt, would eventually generate a debt-serving capability in the economy and stimulate domestic savings (Amsden, 1989). To achieve export growth, the government initially financed the necessary funds required for the increase of exports. While promoting the use of foreign capital, an export orientation included many specific policies, such as the devaluation of the Korean *Won*, the reduction of tariffs on inputs used for manufacturing exports, and other forms of export subsidies (Yoo and Moon, 1999).

The rise and fall of *Chaebols* in the 1960s was, however, still decided in large part by political connections, because the state intervened in business activities through arrangement of projects, allocation of foreign capital and monopolization of domestic financial institutions. Kim (1997) argues that the government's economic policy in this period was oriented to reduce risks by decreasing any internal competition and supporting large government-favoured entrepreneurs. In this situation, most large *Chaebols* depended more on the political game by connecting with powerful politicians or bureaucrats. Even though the Korean economy recorded rapid economic growth and industrialization in the 1960s, the financial dependence of *Chaebols* on the government increased (Kim, 1997). Conclusively, the fundamental relationships between government and *Chaebol* were not changed from the previous regime.

2.3 Park's *Yushin* Regime – The Fourth Republic (1972-1979)

In the early 1970s, the government thought it imperative to develop the heavy and chemical industries (HCIs), including the iron and steel, non-ferrous metal, shipbuilding, general machinery, chemical and electronic industries. Several internal and external factors contributed to this change in perspective (Sakong, 1993). As an external factor, the declaration of the Nixon Doctrine[8] toward the end of the Vietnam War compelled nations like Korea to re-evaluate the development of a defense industry. Under these circumstances, the government thought that promoting the HCIs would strengthen Korea's defense capability and upgrade its industrial structure.

Internally, Korea's comparative advantage in light industries declined sharply as the industrialized nations raised protective barriers against light-manufactured goods and services from developing countries. The HCI policy was, therefore, designed to build a self-sufficient economy to cope with the intensified trade protectionism of the developed countries. In addition, domestic political conditions also changed in the early 1970s giving President Park additional rationale for promoting HCI (Kim, 1997). Park won a narrow victory against a leading opposition leader in the 1971 presidential election. This precarious victory, amid rumours of extensive vote-buying, caused Park to announce the *Yushin* Reformation in October 1972, changing the constitution to allow himself a life-term presidency. To earn public support and appease the public prior to the promulgation of the draconian *Yushin* Reformation, Park announced the economic goals to be achieved by 1981 as "GNP per capita of US $1,000, and US

[8] International geopolitical conditions changed when President Richard Nixon of the U.S. made an announcement regarding the defense of the Pacific during his visit to the Guam Islands in 1969 and with the defeat of the U.S. in the Vietnam War. President Nixon announced that the defense of the Pacific must lie in the hands of the people in the Pacific and declared that U.S. troops would gradually be withdrawn from various bases in Asia, including Korea. (Kim, 1997)

$10 billion in export." (Kim, 1997, p140). Once again, this was another attempt to earn public support and political legitimacy with economic delivery, as in the aftermath of the 1961 military coup. In January 1973, President Park urgently called for the development of the nation's heavy and chemical industries. However, the private sector was not capable of investing in the HCIs due to the lack of the capital and technology and thus Korean firms could not join the HCI policy without the government's strong support. The government presented, therefore, various advantages for large companies to join the HCI policy through preferred support given by the tax, trade and credit policies. Due to the state's strong and concerted support, manufacturing investment during the late 1970s was predominantly directed to HCIs (See Table II-4).

<Table II-4> Investment by Heavy and Light Industries, 1976-79

(as a share of total investment)

	1976	1977	1978	1979
Light Industries	25.8	24.6	17.5	18.1
Heavy Industries	74.2	75.4	82.5	81.9

Source: Korea Development Institute, 1981: Quoted in Sakong (1993, p.58)

With the government's support, many *Chaebols* invested a massive amount of capital to HCIs, which caused the massive concentration of wealth and the growth of the *Chaebol.* Table II-5 and Table II-6 show a great deal of business expansion of large *Chaebols* in the 1970. According to the Table II-6, among the 191 subsidiaries of the top 10 *Chaebols*, excluding the 15 missing cases, 114 were established or incorporated during the 1970s while only 34 were established or incorporated in the 1960s and only 20 were established or incorporated before 1960. Furthermore, although most of the top 10 *Chaebols* except Daewoo were established before 1960, they were able to develop rapidly during the 1970s following the government's HCI policy. However, not all the *Chaebols* could grow dramatically. According to Jones and Sakong

(1980), seven of the top 10 *Chaebols* in the mid-1970s ranked by sales were new ones compared with those of mid-1960s. In other words, many of the previous *Chaebols* that could not follow with the new government's development plan were excluded from the chance to grow more.

<Table II-5> Basic Indicators of the10 Largest *Chaebols*, 1971-1980

Chaebol	Foundation Year	Total Assets		Average Annual Growth Rate of Total Assets (%)
		1971	1980	
Hyundai	1947	158,261	2,874,114	38.0
Samsung	1951	415,978	1,901,127	18.4
Lucky-Gold Star	1947	437,060	1,825,429	17.2
Daewoo	1967	34,679	1,663,400	53.7
Ssangyong	1954	310,424	1,255,876	16.8
Hanjin	1945	83,734	1,085,337	32.9
Kukje	1949	153,489	772,993	19.3
Dae Lim	1939	64,522	748,795	31.8
Korea Explosives	1952	256,424	695,363	11.7
Sunkyong	1953	40,049	666,359	36.7

Note: 1. Rank order based on total assets in 1980.
2. Foundation year of mother firm.
3. Total assets in 1980 constant Korean million *Won*.
Source: Kim, 1997 p.153.

<Table II-6> Year of Establishment of Subsidiaries of the 10 Largest *Chaebols* in 1984

Chaebols	Total	-1949	1950-59	1960-69	1970-79	1980-84	Missing
Samsung	30	1	3	6	11	8	1
Hyundai	32	1	2	4	20	1	4
Lucky-Gold Star	24	1	2	5	10	3	3
Daewoo	24	0	0	0	21	3	0
Sunkyung	14	0	1	1	7	3	2
Ssangyong	14	2	1	3	6	2	0
Korea Explosives	18	0	1	5	8	3	1
Kukje	18	1	0	0	13	0	4
Hanjin	12	1	0	5	7	0	0
Hyosung	20	1	2	5	12	0	0
Total	191*	8	12	34	114	23	15

Note: * Missing 15 subsidiaries were excluded from the total.
Source: Hankook Newspaper Co. 1985 p.343.

However, such disproportionate incentives – along with over-optimistic assumptions regarding world trade prospects – led to excessive investment in some industries (Kim, 1997). In addition to creating inefficiencies in investment, the HCI promotion policy gave rise to serious sectoral imbalances. As the government-favoured HCI projects preempted limited financial resources, credit to other industries – such as light manufacturing – was dramatically squeezed.

In summary, from 1973 to 1979, the government was deeply involved in the allocation of resources to promote the development of specific industries. The government policy of long-term economic planning with the aggressive entrepreneurship of the *Chaebol* transformed the Korean industrial structure and secured the dominant position of the *Chaebol.* Moreover, because of huge capital requirement and weak business position of small and medium-seized firms, the new HCI projects were granted exclusively to large *Chaebols*, contributing to the concentration of economic power among a few large business conglomerates.

2.4 Chun's Regime – The Fifth Republic (1980-1987)

The political turmoil of Korea from the assassination of President Park in 1979 resolved with the emergence of the Fifth Republic. In 1980 the Korean economy was faced with some serious problems that had their origin in external factors as well as certain past industrial policies. First, a worldwide recession following the second oil shock in 1979 harshly affected the state. Second, the country suffered from domestic inflation and political instability following President Park's assassination. Finally, according to Amsden (1989), industrialized countries began to lose their comparative advantage in many of their traditional manufacturing industries and grew more protectionists, while developing countries, such as China, began their rapid industrialization, specializing in the production of low-skilled, labour-intensive items.

Facing these circumstances, the new government under President Chun adopted several stabilization policies (Lee and Yamazawa, 1990). First, the macroeconomic policy implemented in 1980 that aimed at stabilizing inflation, galloping at an average annual rate of 19.7 percent measured in terms of the whole price index. Second, policy involved a structural readjustment of the heavy and chemical industries. Due to overlapping and excessive investments in the 1970s and a lack of demand caused by the world recession, most of the firms suffered large losses. Third, policy introduced to help reshape the economy was a revocation of the large incentives given the HCIs in the 1970s. Loans no longer carried preferential rates of interest. As the last four rows of Table II-2 show, the government took steps, abolishing preference loans by eliminating interest rate differentials. The forth measure involved the promotion of market competition and the elimination of various factors inhibiting a competitive environment including financial liberalization, mitigating the effects of excessive concentration of wealth in the *Chaebols*, and improving the decreasing level of capital efficiency. At the same time, the government diversified its equity shares in all nationwide commercial banks, transferring ownership to private hands. Financial services provided by different types of intermediaries were diversified and made increasingly to overlap, while entry barriers into financial markets were lowered. Progress was also made in the area of monetary and credit management as a result of the relative decline in policy loans and phased interest rate deregulation (Kim, 1997). Finally, the fifth measure was the government's emphasis on the growth of the small and medium-sized firms. To this end, the government promoted the manufacture of technology-intensive or skilled labour-intensive products.

Despite these readjustments policies, the current economic situation made the government continue its intervention in business activities. Many large enterprises in the early

1980s were on the edge of bankruptcy because of the unfavorable external and internal economic situations. The rapid increase of labor wages, the over-and-duplicated investment on the HCIs, the worldwide recession in the early 1980s and increasing foreign debt made many *Chaebols* vulnerable in their international competitions. In order to correct this situation, the government intervened and coordinated negotiations among firms for the relinquishing of project or reduction of capacity with mergers in some cases[9].

Although the government's readjustment policies began the process of institutionalizing more efficiency in the corporate sector, the government failed to eliminate the state's implicit guarantee to the *Chaebol*. The government cushioned the industry so that if the *Chaebol* needed help, the government was there to rescue. It was thus the state guarantor of private debt, thereby underwriting risk. This guarantee led to the strong belief in Korea that the state would insure their survival, because the *Chaebols* were "too big to fail". In other words, the country could not help adverting the moral hazard problem in the corporate/financial sector even after the massive economic reform in the early 1980s.

One critical question may be asked at this point. If the moral hazard is the cause of the Korean financial crisis, why did the crisis not occur until 1997? Since the moral hazard of the country had existed for decades, it could have happened anytime, including this readjustment period. According to Glick (1998), rapid economic growth masked much of the extent of risky lending and the structural weaknesses of the corporate/financial sector. Financial liberalization

[9] There were two more rounds of massive industrial restructuring and bailouts in the 1980s. One was the restructuring of two ailing industries in the mid-1980s: overseas construction and shipping. The restructuring packages included mergers, capacity reduction, debt rescheduling and fresh bank loans. The other industry rationalization was made under the Industrial Development Law of 1986 involving such industries as automobiles, diesel engines, heavy electrical equipment, heavy construction equipment, textiles and shoes. Included in the rationalization packages were inducement of specialization, capacity reduction, long-term supply contracts together with such financial support as long-term loans at subsidized interest rates, loans loss compensation and debt write-offs. About half of the commercial bank loss was replenished by subsidized central bank loans (Lee, 1999).

in the 1990s, therefore, should be seen as having exacerbated the structural weaknesses of Asian economies and increased their vulnerability to a critical level. Through the 1990s financial liberalization, Korea was much more closely integrated with world financial markets in the 1990s than they had been in the 1980s, so that the country's susceptibility to changes in market sentiment increased[10]. What is different is that international funds flow much more easily to the country because of the liberalization of the financial market. Closer integration with world financial market adds additional dimensions of vulnerability that are not present in a closed economy such as China (Moreno et al, 1998). Thus domestic financial liberalization and the increased volume and volatility of international capital flows combined to exacerbate structural weaknesses arising from moral hazard in under-regulated Asian financial market (Glick, 1998).

From the late 1980s, Kim (1997) argues that the businesses surpassed the government in certain technological areas and no longer need government subsidies to survive. The government lost its bargaining power when the *Chaebol* found other ways to raise capital investment. The government was able to make credible demands on the *Chaebol* when it was the sole dispenser and distributor of credit. However, Korean conglomerates had alternative investment methods to line up credit and raise capital through bond or stock offering. As a result, the government was weakened in its ability to control the private sector from the late 1980s.

In summary, modern Korean industries and entrepreneurial elites could accumulate capital by industrial monopolization under the state's protection. They established industrial bases during the 1950s and 1960s by foreign aid and foreign borrowings, and expanded their wealth rapidly during the 1970s under the government HCI development plan. Moreover, the

[10] Korean financial liberalization in the 1990s will be addressed in the latter section of this chapter.

direct state intervention in the 1970s and 1980s created moral hazard. In other words, because of implicit government guarantees, the *Chaebol* no longer felt compelled to fulfill their obligations to their respective banks. In the financial sector, banks lent to the *Chaebol* after the state guaranteed the loans, instead of fostering an innovative banking industry that applied financial tools to evaluate firms, minimize risk and gauge the *Chaebols*. Banks did not need to use complicated tools to evaluate firms when the safest bet was to give loans to state-backed *Chaebols*. Chapter 3 and 4 will cover the moral hazard problem of the Korean economy as a fundamental cause of the crisis.

2.5 Financial Liberalization in the 1990s

Financial reform in Korea has been progressing on many fronts since the early 1990s. This has resulted in many changes and new challenges, particularly in the financial sector.

2.5.1 Interest Rate Liberalization

To bring interest rates more in line with financial markets' fluctuations, the Korean government launched a four-staged interest rate liberalization plan in November 1991 (See Table II-7). This plan applies to interest rates on all deposits and loans. The state hoped that the new deregulated interest rate would accurately represent the way capital was moving through the domestic financial market; in this way it aimed to promote the efficient distribution of capital and improve the competitiveness of the financial sector (Bank of Korea, 1994). However, liberalization of interest rates does not guarantee efficient capital distribution. Rather, there have to be other institutional settings for a rational decision-making process. It is now apparent that while the government made gradual gains in interest rate liberalization, it continued to direct the

nation's commercial banks and other financial institutions toward making investment in certain strategic industries that would latter prove to be inefficient (Haggard and Mo, 2000).

<Table II-7> Interest Rate Liberalization

Stage	Lending Rates	Deposit Rates	Bond Issue Rates Objects
1st November 1991	- Bank overdrafts and discounts on commercial bills, apart from loans assisted by BOK* rediscounts - Discounts on commercial paper and trade bills of investments and finance companies, etc - Overdue loans	- Short-term, large denomination deposit instruments such as certificates of deposit, trade bills, commercial paper and repurchase agreements - Long-term time deposits and money-in-trust with a maturity of at least 3 years	- Corporate bonds with a maturity of at least 2 years
2nd November 1993	- All loans of banks and non-bank financial institutions, apart from those provided through government or BOK rediscounts	- Long-term deposit with a maturity of 2 years or more	- Corporate bonds with a maturity of less than 2 years and all bank debentures - Monetary stabilization bonds and all government and public bonds
3rd 1994-1995	<1994 – 1995> - Loans financed by BOK rediscounts such as discount bills <1996> - Loans with banking funds compensated for interest rate gap by government funds (special equipment loans, etc)	- Further deregulation of short-term marketable products → Phasing out regulations on issues and maturities - Deposit excluding demand deposit →Introduction of financial products linked to market rates	
4th During 1997		- Setting up plan for gradual deregulation of demand deposit - Reviewing an abolition of restrictions on short-term marketable instruments	

Note: * Bank of Korea.
Source: Bank of Korea, 1994 p.5

2.5.2 Foreign Exchange Liberalization

The Phase III Plan of foreign exchange liberalization in November 1997 achieved two major objectives: First, it brought Korea closer to a free-floating foreign exchange system by widening the band at which currency exchange may vary from the standard rate; second, it deregulated foreign currency transactions within a preset limit by eliminating documentation requirements (See Table II-8). Since adopting a market average exchange rate system in March 1990, the government had been incrementally widening the foreign exchange fluctuation band from 0.4 percent to 1.0 percent in October 1993, to 1.5 percent in November 1994 and finally to 2.25 percent in December 1995. The Phase III Plan further expanded the band to 10 percent in November 1997. This last increase was a defensive response to the extreme destabilization of the Korean currency, a situation that was taking the economy toward a financial crisis (Cho, 1999a).

<Table II-8> Foreign Exchange Liberalization (Phase III Plan)

Stage	Starting Year	Liberalization Contents
1st	1993	- From October 1, the daily fluctuation band of the interbank foreign exchange rate will be widened to plus and minus 0.8 percent. - From July 1, the overall foreign exchange oversold position limit will be raised to 30 percent of the bills bought in the previous month or US$ 20 million, whichever is larger, from the current 20 percent or US$ 10 million limit. - From July 1, firms can hold foreign currency deposits of up to US$ 300 million in exchange for won currency without presenting underlying documents, compared with the current US$ 200 million limit. - From July 1, underlying documentation will be required for all foreign exchange forward deals 45 days after signing of contracts, compared with the current 30 days. - Import or export settlements in Korean currency up to US$ 100 thousand will be permissible from October 1. - From October 1, non-residents will be permitted to open free won accounts (demand deposit accounts).

2nd	**1994-1995**	- The daily fluctuation band of interbank rates will be further expanded. - Criteria for monitoring foreign exchange position of banks will be shifted from controlling only the overbought position to weighing both the overbought position and capital size. - The limit for oversold spot FX position will be readjusted after taking into consideration the development of the foreign exchange market. - Underlying documentation requirements for foreign exchange forward contracts will continue to be softened so that both industrial and financial institutions will be fully responsible for their own exchange risks. - A full exemption on underlying documentation requirements for foreign exchange forward contracts between foreign currencies (1994). - Firms can hold foreign currency deposits without limit in exchange for won currency without presenting underlying documentations (1994). - The scope of exemptions on underlying documentation for forward transactions between won and foreign currencies will be widened (1994). - The maximum limit for exports and imports settlement in won will be raised beyond US$ 100 thousand.
3rd	**1996-1997**	- To pursue the establishment of a free-floating foreign exchange rate system as used by advanced countries. - Focus on foreign exchange position management will be shifted from monitoring exchange market to promoting sound business managements of foreign exchange banks. - Underlying documentation requirements for normal and ordinary transactions will be waived but the principle of real demand use in foreign exchange forward contracts will be maintained. - Invisible trade, in addition to visible trade, will be permitted to be settled in the won currency on a step-by-step basis.

Source: The Korea Times, June 30, 1993 p.9.

2.5.3 Capital Account Liberalization

In 1981, the government announced a long term plan that would open the nation's securities markets to foreigners. As a first step, onshore investment trust funds (exclusive to foreign investors) were established to provide opportunities to invest in Korean securities (The Korea Times, June 30, 1993). In 1991, the Korean stock exchange began allowing membership to foreign securities houses, and on January 3, 1992, the Korean stock market was opened to direct foreign investment with certain restrictions: a ceiling of 10 percent on the aggregate foreign positions in any class of shares of a company, and a ceiling of 3 percent for a single foreign investor.

These ceilings were raised in June 1993 with phase III of the capital market liberalization plan (See Table II-9), launched as part of the government's blueprint for financial market liberalization. As well as opening its own markets to foreign investors, Korea paved the way for domestic investors to invest directly in foreign securities in 1994. Beginning with Sammi Steel Corporation's overseas bonds with warrants in November 1989, and Samsung Corporation's overseas depositary receipts in December 1990, listed companies in Korea began actively working towards global securitization. In May 1998, the Korean equity and debt securities markets were further liberalized with the elimination of ceilings on foreign positions and the opening of the short-term debt securities markets to foreign investors.

Capital accounts liberalization in a broad sense refers to any action that releases or removes legal obstacles laid upon the international movement of capital. The most common first step to capital accounts liberalization is the opening of the domestic securities market to foreign investors. From this initial step, cross-border transactions of assets with maturities of one year and over are liberalized. In the advanced stages, the short-term assets market is open. Capital liberalization is complete when deregulation extends beyond the asset markets to direct investments, real estate, non-securitized rights, credits related to international trade, financial collateral and insurance, foreign currencies, savings accounts transaction, life insurance and similar financial transactions (Cho, 1999a).

In Korea, large banks were able to raise short-term funds from overseas under an arrangement that gave them a virtual monopoly on foreign commercial loans. The resulting unhedged exposure to foreign exchange volatility left the economy highly vulnerable to the liquidity crunch that arrived in late 1997. The Korean government has since been condemned for its loose supervision of domestic banks and their portfolio structure.

<Table II-9> Capital Accounts Liberalization (Phase III Plan)

Stage	Starting Year	Liberalization Contents
1st	1993	**(Direct Investment)** - The notification system for direct foreign investment in Korea has been adopted in principle. - The pre-notice plan for opening of domestic industries to direct foreign investments was announced. - Korean firms will enjoy simplication of application procedures and easing of restrictions for overseas direct investments. **(Outbound Portfolio Investment)** - Both the scope of institutional investors and their investment limits will be expanded or raised. From October 1, securities and insurance companies will be permitted to expand their overseas portfolio investment ceiling to US$ 100-200 million, compared with the current limit of US$ 50-100 million. - Individual investors will be able to make indirect portfolio investment overseas through investment trust companies and their investment ceiling will be expanded as demand increases. **(Inbound Portfolio Investment)** - From August 1, the current 10 percent foreign ownership ceiling will not be applied to joint venture listed companies in which foreigners control more than 50 percent of the equities. But prior consent from these companies is required. **(Overseas Fund Raising by Firms in Korea)** - The notification system has already replaced the prior approval system. For Korean companies seeking to raise overseas capital through issuance of equity linked bonds including convertible bonds, bonds with warrants and depositary receipt. - The deferred payment period for imports of raw materials for export purposes has already been extended to 120 days from the previous 90 days. - From July 1, foreign firms or joint venture hi-tech services companies will be permitted to introduce offshore short-term capital. Foreign hi-tech manufacturing companies have already been given access to offshore short-term capital.
2nd	1994-1995	**(Direct Investment)** - In accordance with the pre-notification plan for opening direct foreign investment in Korea, the scope of industrial sectors eligible for foreign investment will be expanded and the investment procedures will be simplified. - Projects eligible for notification to the government for investing overseas will be expanded. **(Outbound Portfolio Investment)** - Institutional investors will be given full freedom in investing in offshore bonds and equities. - The scope of the allowable limit for individual investors to invest in overseas bonds and equities will be expanded. **(Inbound Stock Investment)** - The foreign stock ownership ceiling in Korean stocks will be raised. - Foreigners, who have stayed in Korea for more than six months but are defined under the Securities Exchange Act as foreigners, will be given national treatment for Korean stock investment (1994). **(Bond Market-Opening)** - International organizations such as the World Bank and Asian Development Bank will be authorized to issue won-denominated bonds in Korea (1995). - Foreigners will be authorized to invest directly in equity-linked bonds and convertible bonds issued by small- and medium-sized companies (1994). - Foreigners will be allowed to underwrite government and public bonds of which yields are similar to international rates (1994). - Foreign firms will be able to invest in bond-type beneficiary certificates as a way of indirectly opening the domestic bond market (1995). **(Overseas Fund-Raising By Firms in Korea)** - Foreign firms of joint venture general manufacturing companies will be allowed to introduce offshore short-term capital. - The period for imports on a deferred payment basis will be further extended.

3rd	**1996-1997**	**(Direct Investment)** - The notification system for direct foreign investments in Korea will be widely implemented. - The notification system will be introduced to liberalize overseas direct investments by Korean companies. **(Inbound Stock Investment)** - The foreign stock investment limit will be raised again. **(Bond Market-Opening)** - Foreigners will be authorized to invest directly in non-guaranteed long-term bonds issued by small- and medium-sized companies (1997). **(Access to Foreign Capital)** - In keeping with the maturity of macroeconomic conditions including balance of payments equilibrium and narrowing of interest rate differentials between domestic and international markets, imports of commercial loans will be authorized and the period for deferred imports will be extended in parallel with international standards. **(Additional Opening of Securities Industry)** - Requirements for opening branches by foreign securities companies will be softened (1994). - Capital requirements for branches of foreign securities companies will be lowered from 10-20 billion won (1996). - Foreign credit rating agencies will be able to establish liaison offices in Korea and have equity participation in local credit rating agencies (1994). - Foreigners can expand their equity participation ceiling in Korea investment trust companies and investment advisory companies (1995). - Foreign credit rating agencies can raise their equity participation ceiling in domestic rating companies (1996).

Source: The Korea Times, June 30, 1993 p.9.

Chapter III. The Origin of the Crisis – Theoretical Review

Numerous research papers, statements and speeches attempted to decipher the origin of the Asian financial crisis. Broadly speaking, however, there are two dominant streams of thoughts explaining the origin of the crisis in contrasting ways: the 'financial panic' and the 'moral hazard' theories. This chapter reviews these two popular theories, and argue that the moral hazard theory best interprets the fundamental cause of the financial crisis in Korea. The following sub-section will, therefore, theoretically review these two explanations of the crisis in 1997. Finally, this chapter will explain the Korean financial crisis assuming that the moral hazard was the fundamental cause of the crisis.

1. Financial Panic

The financial panic theory argues that the main cause of the financial crisis was an irrational panic among speculative investors. According to Radelet and Sachs (1998a, 1998b), for example, there was nothing wrong with the fundamentals of the Asian economies prior to the crisis. The Asian financial crisis was caused not by any weakness of the Asian countries' economic fundamentals, but by international investors' panicky behaviour; such behaviour primarily involved in a sudden shift in market confidence and disrupted capital flows to Asia (Radelet and Sachs, 1998a). In other words, at the core of the Asian financial crisis were large-scale foreign capital inflows into financial system that became vulnerable to panic. Therefore, Radelet and Sachs suggest that the structural deficiencies of the international capital market is the prominent culprit of the rapid economic meltdown in East Asia and its spread to the rest of the region, and that the affected countries' economic fundamentals became vulnerable to external shock prior to the Asian financial crisis.

It is true that during the 1990s, many Asian economies enjoyed a drastic increase in capital flows compared with the 1980s, resulting from their market opening and good market forecast, even though the institutional weaknesses of these economies were well known for decades[11] (See Table III-1). The volume of capital inflows into the region averaged over 5 percent of GDP between 1990 and 1996. Most notably, capital inflows into Thailand and Malaysia were equivalent to 13 percent in 1995 and 16.8 percent in 1993 of those year's GDPs, respectively.

<Table III-1> Capital Flows in Selected Economies prior to the Crisis

(percent of GDP)

Country	83-89	90-95	90	91	92	93	94	95	96
Korea	-0.8	3.0	1.1	2.3	2.3	1.0	2.8	8.5	5.0
Indonesia	4.0	3.9	3.9	4.4	4.4	3.6	2.2	5.1	N/A
Thailand	4.6	10.2	10.7	12.0	8.5	8.4	8.4	13.0	10.7
Malaysia	3.6	9.7	4.2	11.7	15.1	16.8	1.8	8.5	N/A
Philippines	1.2	6.4	4.6	6.4	6.1	6.0	8.0	7.2	N/A
Singapore	4.9	-0.2	10.5	5.4	3.6	-1.9	-16.1	-2.9	0.6

Note: The financial capital flows in this table includes portfolio investment and direct investment by the government.
Source: Bank of Korea, Various years: Quoted in Rhee and Lee (1998, p.9).

This massive capital inflow started to reverse when the Thai *Baht* plummeted in value after the Thai government abandoned its pegged exchange rate, given the country's huge trade deficit in July 1997. According to Bowles (1999), once Thailand was forced to devalue its currency, it reinforced international investors' self-fulfilling expectations and made them look for 'similar' countries. Thus, Bowles argues that countries with fixed exchange rates, low

[11] As Corsetti et al. (1998) point out, Asia's consumption and investment boom might have resulted from the region's overly-optimistic beliefs that the economic expansion would persist unabated in the future. These large capital inflows make it easy to finance the increasing demand. In such circumstances, Corsetti et al. argue that a sudden change in expectations in response to an external shock can cause a rapid reversal of capital flows and in turn trigger a currency crisis.

foreign exchange reserves, high trade deficits and soaring inflows of short-term capital were potential targets for investor panic and currency flight. As a result, between 1996 and 1997, Thailand experienced a sudden reversal of capital inflows equivalent to approximately 20 percent of that year's GDP. For the five troubled economies – Indonesia, Korea, Malaysia, Philippines and Thailand – net capital inflows plummeted from US$ 97 billion to negative US$ 12 billion in 1997. This turnaround of US$ 109 billion in a year is equivalent to about 10 percent of pre-crisis GDP of these five countries (Radelet and Sachs, 1998a).

This sudden withdrawal of foreign capital had significant economic effects in Asia. As Radelet and Sachs (1998b) argue, the withdrawal of foreign credit resulted in a rise in domestic interest rates, which in turn led to a tightening of domestic credit conditions while the nominal and real exchange rates sharply depreciated. In the case of Korea, the *Won* currency dropped in value by 50 percent and the domestic interest rate doubled between the end of 1996 and the end of 1997. The real exchange rates depreciation and much higher domestic interest rates led to a rapid rise in non-performing loans and a sudden loss of bank capital in the crisis-hit economies, where banks borrowed short-term, unhedged and US dollar denominated loans to finance long term domestic investment.

Similarly, Wade and Veneroso (1998) contend that the Asian economies were relatively healthy and efficient prior to the crisis. High savings in Asian countries naturally led to high debt/equity ratio of industrial firms, which worked as the engine of strong economic growth. They argue that Western and Japanese banks and investment houses were responsible for the crisis. These international bankers, who usually had a powerful incentive to follow the herd, ignored their own prudential limits and lent heavily to Asian companies over the 1990s, assuming that high growth would continue and the exchange rate would remain stable.

It is one thing, however, to point to the irrational behaviour of international investors as the source of the problem, and another to argue that the fundamentals of the Asian economy were strong prior to the crisis. According to Radelet and Sachs (1998a, 1998b), there was nothing wrong with the fundamentals of the Asian economies prior to the crisis. However, the Korean economy was already on the path to a crisis years before the actual financial crisis hit the country. The symptoms of the impending financial crisis in Korea started to appear when the economy began to slow down in 1996. As Table III-2 shows, the current account deficit widened from US$ 8.5 billion in 1995 to US$ 23 billion in 1996. The ratio of the current account balance deficit to GDP rose to 4.7 percent in 1996 from below 2 percent in the two preceding years. This widening current account deficit was brought by the deceleration of export growth due to the fall in the prices of Korea's major export items, especially computer memory chips, coupled with a rapid expansion of imports, most notably of capital goods and consumer goods, which eventually caused the massive corporate bankruptcy in the early 1997 (Nam et al., 1999).

<Table III-2> Current Account Balance, 1994-1998

(year on year growth rates, percent)

	1994	1995	1996	1997	1998
Current Account (US$ billion)	- 3.9	- 8.5	-23	- 8.2	9.7
Current Account /GDP	-1.0	-1.9	-4.7	-1.9	2.1

Source: National Statistical Office: Quoted in Nam et al (1999, p.4).

Radelet and Sachs (1998b) hardly mention the continuous bankruptcies of many Korean *Chaebols* during the period from early 1997 to the onset of the crisis. They also fail to acknowledge that the Korean banking sector was burdened with huge amounts of non-performing loans due to inefficient banking practice even before the financial crisis in the late

1997. Instead, they argue that exchange rate depreciation, precipitated by sudden withdrawal of capital and the improper IMF macroeconomic policies, was the major cause of the debt problems in Korea. To be sure, foreign exchange depreciation and high interest rates since December 1997 added to the debt burden of Korean firms. It is also critical to point out that, however, huge amounts of inherited external debts, plus additional debts imposed on the banks by the unprecedented number of bankruptcies of *Chaebols* since the early of 1997, were important causes of the crisis (See Table III-3). The ratio of external debts to GNP rose to 21.8 percent in 1996 from 14.0 percent in 1992, where the major debt holders were financial institutions.

<Table III-3 > External Debts by Sector in Korea

(Unit: US$ billion)

	1992	1993	1994	1995	1996	1997
Public Sector	5.6	3.8	3.6	3.0	2.4	18.0
Corporate Sector	13.7	15.6	20.0	26.1	35.6	42.3
Financial Sector	23.5	24.4	33.3	49.3	66.7	60.5
Total	42.8	43.9	56.8	78.4	104.7	120.8
Long-Term	24.3	24.7	26.5	33.1	43.7	69.6
Short-Term	18.5	19.2	30.4	45.3	61.0	51.2
Total/GNP (%)	14.0	13.3	15.1	17.3	21.8	27.5

Source: Cho, 1999a p.20.

As a result, many domestic banks – such as Seoul Bank and First Bank – were already close to the point of bankruptcy even before the crisis: this led negotiators from the IMF and the government to decide to liquidate these troubled banks in negotiations leading to the first IMF bailout (Yoon, 1998). In this way, Radelet and Sachs see only what happened after the crisis and disregard prior events.

Furthermore, Radelet and Sachs argue, "the crisis involved considerable lending to debtors that were not protected by state guarantees" (1998b, p5). However, in the case of Korea,

all the domestic financial institutions were explicitly and/or implicitly guaranteed by the government[12]: at least financial institutions and foreign investors thought that they were protected from possible loss by the government. This moral hazard certainly worked as an incentive for foreign banks to make loans excessively to Korean financial institutions. When the Hanbo Group collapsed in February 1997, for example, the Secretary of Economic Affairs announced that the Korean government would not guarantee Korean banks' foreign debts. This resulted in enormous panic among international investors, and the official retracted the statement in less than a week (Ahn, 1999).

Wade and Veneroso (1998) seem to agree with Radelet and Sachs that there was nothing fundamentally wrong with the Korean economic model. For instance, according to Wade and Veneroso, Western commentators who dismiss the system as 'crony capitalism', seeing only its corruption and favouritism, miss (1998, p7)

> "...the financial rationale for cooperative, long-term, reciprocal relations between firms, banks and government in a system which intermediates high savings into high corporate debt-equity ratios. (They also miss the cronyism of U.S. capitalism, generated by the electoral finance regime.)"

However, according to Yoon (1998), Wade and Veneroso do not recognize that this 'cooperative, long-term, and reciprocal relations between firms, banks and government' also provided politicians and *Chaebol* owners with the opportunity to seriously distort Korea's political and

[12] There seem to be a number of studies that back up the Korean government's explicitly and/or implicitly guarantee towards the domestic financial institutions. See Amsden (1989), "Asia's Next Giant: South Korea and late Industrialization", New York: Oxford University Press as well as Roubini (1999), "What caused Asia's Economic and Currency Crisis and Its Global Contagion?" for more details.

economic structure. The slush fund scandals of former presidents Chun and Roh, and the Hanbo collapse, vividly show how seemingly benign trilateral relations could be turned into ugly relations. This moral hazard phenomenon was nothing but the mirror image of these 'cooperative, long-term, and reciprocal relations'.

In summary, from the perspective of the financial panic theory, the region's economies were inherently sound and could have continued functioning well, but an arbitrary shift in market expectations that interrupted capital flows to Asia triggered the financial crisis in 1997. To be sure, the financial crisis was triggered by the investors' irrational panic. However, given the empirical evidence above, it is hard to believe that the fundamentals of the Korean economy were sound. The economy was already on the path to a crisis years before the actual financial crisis hit the country. The economy suffered from a string of major corporate bankruptcies followed by unbearable burden of non-performing loans in the financial sector, which in turn, greatly undermined international confidence and hence caused a massive pullout by foreign investors from the country.

2. Moral Hazard

An alternative explanation, which this study favours, emphasizes internal factors as the cause of the East Asian economic crisis. This hypothesis focuses on the moral hazard problem in the debtor countries' financial and industrial sectors as having the leading role in the crisis. For instance, Krugman argues (1998, p3)

> "The problem began with financial intermediaries – institutions whose liabilities were perceived as having an implicit government guarantee, but were essentially unregulated and therefore subject to severe moral hazard problems. The excessive risky lending of these institutions created – inflation not of goods but of asset prices. The overpricing of assets was sustained in part by a sort of circular process, in which the proliferation of risky lending drove up the prices of risky assets, making the financial condition of the intermediaries seem sounder than it was."

This interpretation emphasises the role that governmental guaranties played in the birth of the crisis, through moral hazard. According to this approach, the loans borrowed by domestic banks from abroad are supported by government. The banks, whose obligations are guaranteed, like "investments that could yield high returns if it gets lucky, even if there is also strong possibility of heavy losses" (Krugman, 1998, p4). That is, foreign capital deviates towards less efficient and riskier projects than those the projects non-guaranteed intermediaries would invest it in. On the other hand, according to Krugman (1998), moral hazard leads to over-investment. When granting a loan, guaranteed intermediaries do not consider the expected profitability of the project but the highest profitability possible for such project (so-called 'pangloss value'), so for

these intermediaries there are more profitable projects to invest it (Garcia and Olivie, 1998, p11). This is why investors receiving loans from guaranteed intermediaries will be willing to pay more than others for certain assets, thus pushing up the price of those assets. Roubini (1998) also argues that most banks in East Asian economies had been implicitly and explicitly guaranteed by governments. Thus, international investors made excessive loans to the banks in East Asian countries, which in turn transferred capital to firms involved in risky projects.

In the case of Korea, it is noteworthy that the number of firms belonging to the Hanbo Group increased while an unsound investment in a steel plant occurred. This means that bank loans were diverted for the purpose of increasing the number of companies in the group (The Joong-Ang Newspaper, February 3, 1997). Most *Chaebol* owners in Korea would have thought, as did Chung Tae-soo (Chairman of the Hanbo Group) that the safest way to avoid collapse would be to increase the number and the size of their companies and take the national economy and creditor banks as their own hostages. As Park Young Bae, President of a commercial bank, complained, "The attitude of the *Chaebol* owners, with the help of politicians and high-ranking bureaucrats in the Ministry of Finance and Economy (MOFE), would suddenly become arrogant when their bank loans exceeded certain levels." (The Dong-Ah Newspaper, May 16, 1997). This *Chaebol* owners' strategy of taking the national economy hostage usually worked as they expected. Even the former deputy prime minister Kang Kyung-sik, who has been known as a believer of market principles, could not let the *Chaebols* collapse as market mechanisms would dictate. After the collapse of the Hanbo and the Sammi Groups, his ministry (MOFE) directed creditor banks to make an agreement to keep providing additional emergency loans to these *Chaebols* (The Dong-Ah Newspaper, April 23, 24, May 19, 1997).

On the other hand, the problem of moral hazard made regulation of the financial system lax, which contributed to excessive inflows of foreign capital and finally to the occurrence of the currency crisis (Balino and Ubide, 1999). International investors believed that the Korean government or the IMF would bail them out if something went wrong. Thus, they did not feel it was necessary to carefully examine the soundness of Korean firms and financial institutions to which they made these excessive loans. Similarly, domestic financial institutions tended to think that the government would rescue business firms if problems arose (Corsetti et al., 1998). They had no incentive to be prudent when borrowing from international investors and lending to domestic industrial firms. This moral hazard driven situation was worsened by the government, to whom the final responsibility of monitoring international financial transactions fell. Cho (1999a) argues that this was because the government had no experience of monitoring international capital transactions and providing the financial system with proper safeguard measures in order to contain risks while opening market.

Indeed, the moral hazard of the Korean economy resulted in excessive investment, high indebtedness, over diversification and low productivity and profitability of the corporate sector, which eventually caused the financial crisis. These moral hazard driven problems of the *Chaebols* will be examined in the next chapter.

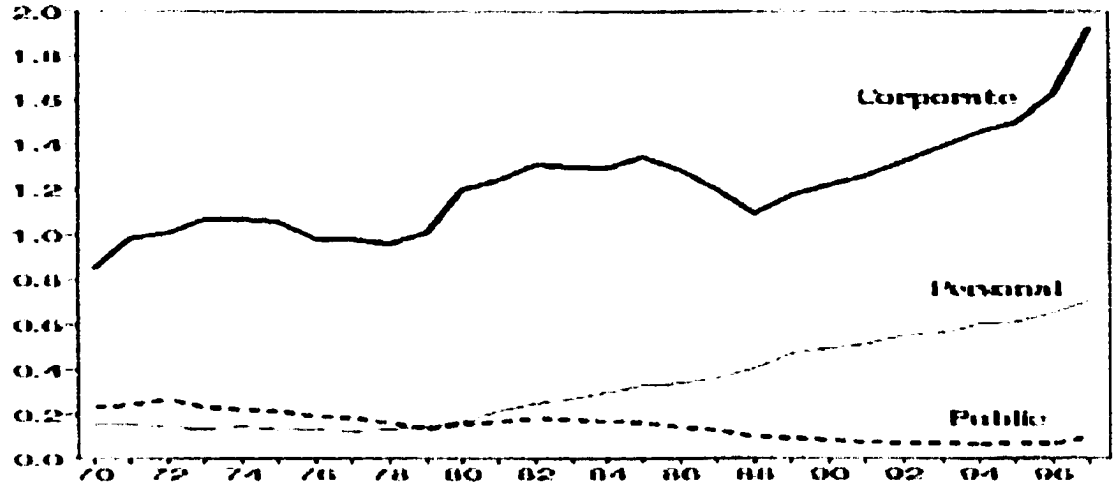
IV. Structural Weaknesses of the *Chaebol*: Cause of the Crisis

This chapter analyses the cause of the Korean financial crisis, which can be attributed to the structural weaknesses of the *Chaebol* in the context of the moral hazard. The moral hazard caused high indebtedness, investment inefficiency and extensive diversification resulting low productivity and profitability leading to massive bankruptcies of the *Chaebols*. This massive corporate insolvency problem translated into a domestic financial crisis making the economy extremely vulnerable and eventually contributing to the financial crisis. By examining these structural weaknesses of the *Chaebol* in the context of the moral hazard, this chapter will demonstrate that these four weaknesses were the fundamental cause of the crisis. In addition, this chapter will try to explain that the *Chaebol*s were already on the path to a crisis years before the actual financial crisis hit the country, due to their moral hazard–driven structural weaknesses.

4.1 High Indebtedness

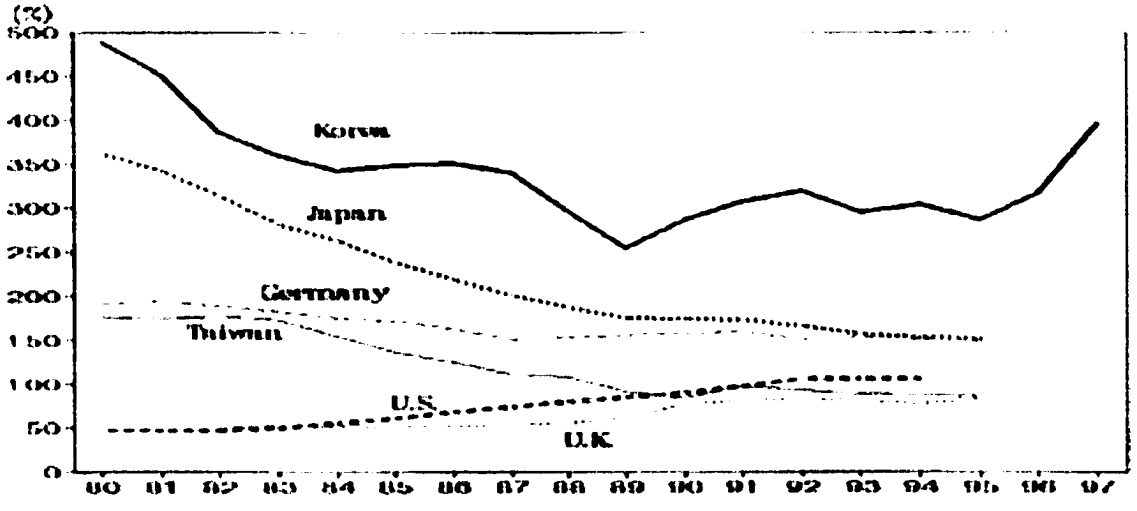
The high exposure to debt financing of large Korean conglomerates was one of the most critical factors on the path to the financial crisis. In 1997, the gross debt of the top 30 *Chaebols* amounted to 357 trillion *Won*, equivalent to 85 percent of that year's GDP (Gobat, 1998). The total debt owned by Korean firms amounted to 811 trillion *Won*, equivalent to 190 percent of that year's GDP (See Figure IV-1). This debt was also highly concentrated: the top 5 *Chaebols* accounted for roughly two-thirds of the top 30 *Chaebols'* debt and 45 percent of Korea's corporate debt. The financial vulnerability of Korean firms can also be seen from the high debt/equity ratios. The average corporate debt/equity ratio in Korea is about 5 times higher than that of Taiwan (See Figure IV-2). By the end of 1997 the average debt/equity ratio of the 30 largest *Chaebols* reached 519 percent, about 130 percent points higher than a year earlier.

<Figure IV-1> Debt/GDP Ratios by Sector



Source: Bank of Korea: Quoted in Nam et al (1999, p.6).

<Figure IV-2> International Comparison of Debt/Equity Ratios



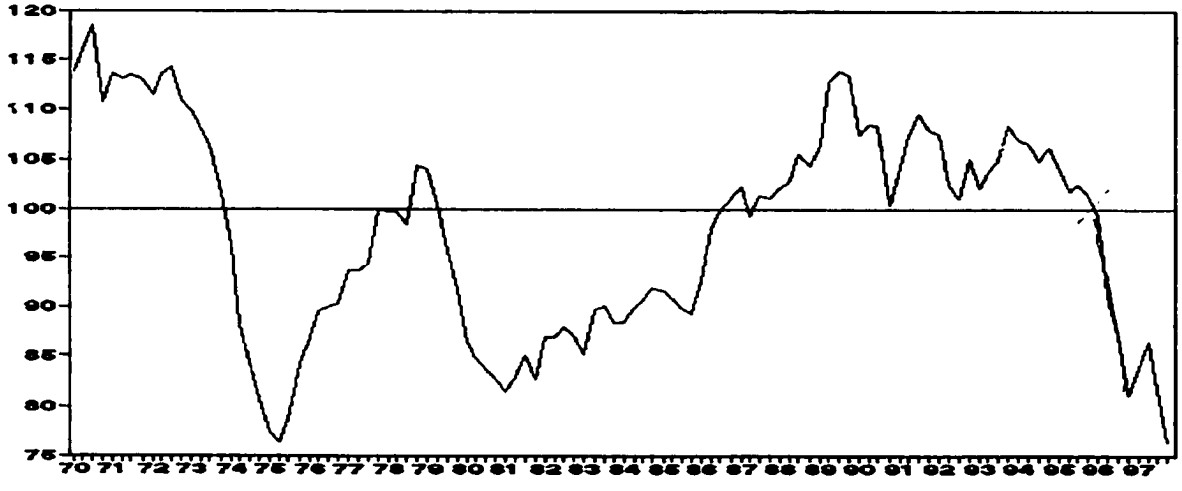
Note: For the manufacturing sector in Korea, Japan and Taiwan.
Source: Bank of Korea, *Financial Statement Analysis*: Quoted in Nam et al (1999, p.6).

Furthermore, *Chaebols'* high indebtedness problem was worsened by domestic banks' excessive exposure to short-term external debt. During 1994-96, Korean firms undertook a major capacity investment financed mainly through borrowing from domestic financial institutions. Korean banks met this increased demand for funds by increasingly turning to

foreign borrowing, often at short maturities (Balino and Ubide, 1999). The share of short-term foreign debt, which amounted to 58 percent of the total external liability of Korea in 1995, increased to 62 percent in 1996, adding up to US $ 100 billion (Yoo and Moon, 1999). This heavy reliance on the short-term debt exposed the country to the risk of a bank crisis. Corsetti et al. (1998) argue that banks would not have been able to liquidate assets rapidly without huge losses if foreign lenders had suddenly refused to roll over short-term debt to domestic banks, precipitating a credit crisis.

Due to the high financial leverage and excessive short-term debt, the corporate sector had been faced with high default risk over the business cycle. Such inherent vulnerability was worsened by both a large negative shock in terms of trade and weak domestic demand in 1996-97 (See Figure IV-3). During this period, Korea's terms of trade deteriorated by more than 20 percent due to the collapse of export price in international market, particularly the price of semiconductors the biggest single Korean export item.

<Figure IV-3> Terms of Trade (Index)



Source: Nam et al., 1999 p.5.

As a result, a number of highly indebted Korean conglomerates ran into serious liquidity problems before the actual crisis hit the country in late 1997. These major bankruptcies directly increased the fragility of the financial institutions that had excessive exposure to these business groups, and undermined foreign investors' confidence and eventually made them rush out of the country.

The rest of the sub-section is organized into two parts. The first part is an introduction to the motives for the heavy indebtedness of the *Chaebols*. This sub-section will prove the fact that the essential aspect of the crisis lies at the moral hazard of the corporate sector. The second part analyzes the *Chaebols'* indebtedness trends. By doing this, this sub-section will explain that the *Chaebols* were already on the path to an economic disaster years before the actual financial crisis hit the country.

4.1.1 Motives for high Indebtedness

There are several factors encouraging the *Chaebols'* high debt financing business practice. First, the government's implicit risk sharing with *Chaebols,* which resulted in the serious problem of the moral hazard, was one of the most critical motivations for the heavy indebtedness of the *Chaebol.* The large conglomerates could pursue heavily indebted growth under the impression that the government would bail them out when their businesses were in trouble. In fact the government was heavily involved in massive bailouts on numerous occasions during the past decades, including the emergency debt freeze in 1972 and restructuring of major heavy chemical industries in the early 1980s[13]. These government bailouts eliminated the fear of bankruptcy and encouraged *Chaebols* to increase their dependency on government-backed loans. The frequent government bailouts of troubled and insolvent firms, therefore, caused the moral hazard, which encouraged large corporations to have large amounts of debt.

Second, the history of government involvement in bank lending decisions also promoted the *Chaebols'* heavy debt financing. As a result of a tradition whereby the government implicitly underwrote banking risks, banks developed limited skills in credit analysis and risk management. Although the government greatly reduced its involvement in bank lending decisions, substantial moral hazard remained, reflecting the implicit guarantee that Korean banks had never been allowed to fail (Balino and Ubide, 1999). The moral hazard within the banking system made it easy for the conglomerates to access money that invested in various fields without adequate scrutiny. Thus, the *Chaebols* were able to indulge in risky moral hazard-driven lending from these institutions.

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[13] The government bailed out many insolvent companies to protect workers from being unemployed, the adverse effect of big business failures on the entire economy, and protect the overseas financial reputation of Korean firms (Lee, 1999).

Third, *Chaebols* preferred bank loans because they could enjoy the interest differential rent. Interest differentials arise from the dual structure of interest rates – in other words, the difference between the market rate and the government-regulated rate[14]. Capital was usually under-priced throughout the rapid growth period. In the 1960s and 1970s, by means of promoting the economic development plan, the government chose a financial repression policy to achieve various kinds of industrial policy goals (Kim, 1997). As the interest rates from commercial banks were historically attractive to borrowers as compared to time deposit rates or inflation rates, the *Chaebol* financed investments with borrowed funds from the commercial banks (See Table II-3).

Fourth, the higher dependency on debt financing made it possible for the *Chaebol* families to control a large business group with a relatively small amount of shares through circular share holdings. For example, according to Lee (1999), firm A in a *Chaebol* group owns a share of firm B worth 1 million dollars, firm B owns a share of a share of firm C worth 1 million dollars, and finally firm C owns a share of firm A worth 1 million dollars. This 1 million dollars does not represent a real asset and it is a paper asset existing only in the accounting system. On average, the owner and relatives own only about 10 percent of the *Chaebol* group's stock in the top 30 business groups. However, circular share holdings by other affiliated firms that own an additional 30 percent of shares enable the largest shareholder to control the firms. In other words, although family owners hold 10 percent of the shares of several core companies within the group, these companies themselves posses holding in other companies in the group. This means that *Chaebol* families contribute a relatively small amount of their wealth to the total

[14] The borrowing cost differential between protected and unprotected industries was about 2-3 percentage points during 1972-1984, at a time when nominal lending interest rates averaged 16 percent. Under these conditions, the *Chaebols* could exploit quasi-rents accompanying loan market disequilibria (Balino and Ubide, 1999).

capitalization of their business groups and yet exercise absolute control over their business groups by means of circular share holdings and debt financing.

Fifth, debt financing was also encouraged by internal financial arrangement, namely the cross debt guarantee system, within *Chaebols* themselves. The conglomerates were able to guarantee bank loans and other forms of corporate debt among their affiliates because those mother companies were "too big to fail". In other words, *Chaebols'* subsidiaries were able to get bank loans due to their mother companies' debt guarantees. The total value of the debt payments guaranteed by the affiliates of the top 30 *Chaebols* amounted to 91 percent of their total equity capital in the mid-1997 (Gobat, 1998). The practice of providing cross debt guarantees among affiliates of business groups, therefore, allowed firms to borrow more easily, and this easy credit led to high leverage in the corporate sector.

Finally, the debt ratio also increased due to low retained earnings and the long-term stagnation of the stock market, making it difficult for *Chaebols* to raise capital. After the boom period of the stock market from 1987 to 1989, the Korean stock market declined except for a few years of transient recovery (Nam et al., 1999). Therefore, firms met their capital needs with debt, mainly credits from bank and non-bank financial institutions.

The fundamental aspect of the *Chaebols'* motivations for high indebtedness lies, however, in the moral hazard, reflecting the implicit assumption that large corporations were "too big to fail". The *Chaebols* were not allowed to go bankrupt due to their massive socio-economic impact. In such an environment, the *Chaebols'* incentive structure with regard to corporate financing was seriously distorted: the more they borrow, the safer they are. These fault lines made the corporate sector extremely vulnerable to unfavourable shock and increased financial market's fragility.

4.1.2 Indebtedness Trends of the *Chaebols*

The promotion of heavy chemical industries in a country with a credit based financial system resulted in the extremely high financial leverage of industrial companies. There is no doubt that the high debt levels of the Korean corporate sector led to massive insolvency and bankruptcies of the *Chaebols*, and eventually to the economy's vulnerability. The financial vulnerability of Korean firms can also be seen from the high debt/equity ratios (See Table IV-1 and Table IV-2). By the end of 1997, the average debt/equity ratio of the 30 largest *Chaebols* reached 519 percent, about five times higher than that of Taiwan (Gobat, 1998). A striking point is that such extremely high debt/equity ratios had shown for several years before the crisis. In 1995, the debt/equity ratios of several *Chaebols* were already at super-high levels: Hanbo Steel Co. (675 percent), New Core Group (924 percent), Jinro Group (2,441 percent), Halla Group (2,885 percent), and Sammi Group (3,245 percent). In 1997, the ratios of total borrowings to sales for those bankrupt *Chaebol* groups were extremely high as well: Hanbo Steel Co. (1,112.9 percent), Jinro Group (169.4 percent), and Sammi Group (116.5 percent) (See Table IV-3). As a result, before the financial crisis all of the above *Chaebols* either went bankrupt or were subject to legal procedures related to composition or reorganization.

To be sure, all the *Chaebols* that ran into trouble in 1997 had already been experiencing considerable financial stress, and thus were vulnerable to the shocks that occurred over the course of 1997. These troubled *Chaebols* were much more indebted than the average of the top 30 *Chaebols*. Furthermore, these *Chaebols* had been posting operating losses since 1993 (See sub-section 4 at the end of this chapter). Many *Chaebols* had shown signs of rapidly deteriorating financial health. The *Chaebols* were, therefore clearly already on the path to economic disaster years before the actual financial crisis hit the country.

<Table IV-1 > Capital Structure of the 30 largest *Chaebols*, 1997

(billion *Won*)

	Assets	Sales	Equity	Debt
1. Hyundai	72,415	78,690	10,670	61,745
2. Samsung	63,536	66,939	13,492	50,044
3. Daewoo	51,791	49,570	9,055	42,736
4. LG	51,435	58,344	8,491	42,944
5. SK	29,019	30,167	5,109	23,910
6. Hanjin	19,037	10,408	1,889	17,148
7. Ssangyong	14,930	20,812	2,988	11,942
8. Hanwha	12,056	11,192	917	11,139
9. Kumho	10,232	5,163	980	9,252
10. DongAh	8,770	4,508	1,907	6,863
11. Lotte	8,842	7,873	2,794	6,048
12. Halla	8,552	6,158	-570	9,122
13. Daelim	6,688	6,574	1,090	5,598
14. Doosan	6,585	3,690	954	5,631
15. Hansol	6,094	3,183	1,219	4,875
16. Hyosung	5,244	6,283	928	4,316
17. Kohab	5,155	3,256	901	4,254
18. Kolon	4,812	4,915	902	3,910
19. Dongkuk	4,594	3,280	1,084	3,510
20. Dongbu	4,375	3,572	998	3,377
21. Anam	4,300	2,446	269	4,031
22. Jinro	4,253	1,618	-536	4,789
23.Tongyang	3,152	2,280	625	2,527
24. Haitai	3,747	3,259	234	3,513
25. Shinho	3,045	1,932	392	2,653
26. Daesang	2,842	1,598	380	2,462
27. New Core	2,845	2,478	151	2,694
28.Keopyong	2,626	1,373	488	2,138
29. Kangwon	2,665	3,381	561	2,104
30. Saehan	2,659	1,603	512	2,147
Total	**462,296**	**406,545**	**68,874**	**357,422**

Source: Fair Trade Commission: Quoted in Gobat (1998, p.34).

<Table IV-2 > Top 30 *Chaebols'* Debt/Equity Ratios

(percent)

1995		1996		1997	
Chaebols	Debt/Equity Ratio	Chaebols	Debt/Equity Ratio	Chaebols	Debt/Equity Ratio
1. Hyundai	376.4	1. Hyundai	436.7	1. Hyundai	578.7
2. Samsung	205.8	2. Samsung	267.2	2. Samsung	370.9
3. LG	312.8	3. LG	346.5	3. Daewoo	472.0
4. Daewoo	336.5	4. Daewoo	337.5	4. LG	505.8
5. SK	343.3	5. SK	383.6	5. SK	468.0
6. Ssangyong	297.7	6. Ssangyong	409.4	6. Hanjin	907.8
7. Hanjin	612.7	7. Hanjin	556.6	7.Ssangyong*	399.7
8. Kia	416.7	8. Kia	516.9	8. Hanwha*	1,214.7
9. Hanwha	620.4	9. Hanwha	751.4	9. Kumho	944.1
10. Lotte	175.5	10. Lotte	192.1	10. DongAh*	359.9
11. Kumho	464.4	11. Kumho	477.6	11. Lotte	216.5
12. Doosan	622.1	12. Halla	2,065.7	12. Halla+	-1,600.4
13. Daelim	385.1	13. DongAh	354.7	13. Daelim	513.6
14. Hanbo	674.9	14. Doosan	688.2	14. Doosan	590.3
15. DongAh	321.5	15. Daelim	423.2	15. Hansol	399.9
16. Halla	2,855.3	16. Hansol	292.0	16. Hyosung	465.1
17. Hyosung	315.1	17. Hyosung	370.0	17. Kohab*	472.1
18. Dongkuk	190.2	18. Dongkuk	218.5	18. Kolon	433.5
19. Jinro	2,441.2	19. Jinro	3,764.6	19. Dongkuk*	323.8
20. Kolon	328.1	20. Kolon	317.8	20. Dongbu	338.4
21.Tongyang	278.8	21. Kohab	590.5	21. Anam*	1,498.5
22. Hansol	313.3	22. Dongbu	261.8	22. Jinro+	-893.5
23. Dongbu	328.3	23.Tongyang	307.8	23.Tongyang	404.3
24. Kohab	572.0	24. Haitai	658.5	24. Haitai+	1,501.3
25. Haitai	506.1	25. New Core	1,225.6	25. Shinho*	676.8
26. Sammi	3,244.6	26. Anam	478.5	26. Daesang	647.9
27. Hanil	936.2	27. Hanil	576.8	27.New Core*	1,784.1
28. Kukdong	471.2	28.Keopyong	347.6	28.Keopyong*	438.1
29. New Core	924.0	29. Miwon	416.9	29. Kangwon	375.0
30. Byucksan	486.0	30. Shinho	490.9	30. Saehan	419.3
Average	347.5		386.5		519.0

Note: * denotes business groups whose subsidiaries were subject to corporate workout after the financial crisis of 1997 and + denotes the business groups that became insolvent.
Source: Fair Trade Commission: Quoted in Nam et al. (1999, p.25).

<Table IV-3 > Total Borrowing to Sales of the Bankrupt *Chaebols*, 1997

(100 million *Won*, percent)

Groups	Total Borrowing	Total Sales	Total Borrowing to Sales
Hanbo	50,970	4,580	1,112.9
Sammi	17,390	14,923	116.5
Jinro	25,257	14,910	169.4
Kia	97,398	121,440	80.2
Haitai	29,329	27,157	108.0
New Core	12,843	18,276	70.3
Halla	54,528	52,973	102.9

Source: Samsung Economic Research Institution, 1999 p.2.

The debt/equity ratios of the Korean *Chaebols* were also excessively high compared to business groups in other countries (See Table IV-4). The average debt/equity ratios of these 30 *Chaebol* groups in 1996 was 450 percent, which is approximately 3 times those of American groups, 2.5 times Japanese *Zaibatsu*, and 5 times Taiwanese groups. This ratio is also high not just for *Chaebols* but for the manufacturing industry as a whole compared with other industrial countries. These high debt/equity ratios of the *Chaebols* reduced flexibility and increased vulnerability of the corporate sector's cash flow, because debt payments have to be paid even if in bad times while equity payments do not.

<Table IV-4> International Comparison of the Average Debt/Equity Ratios

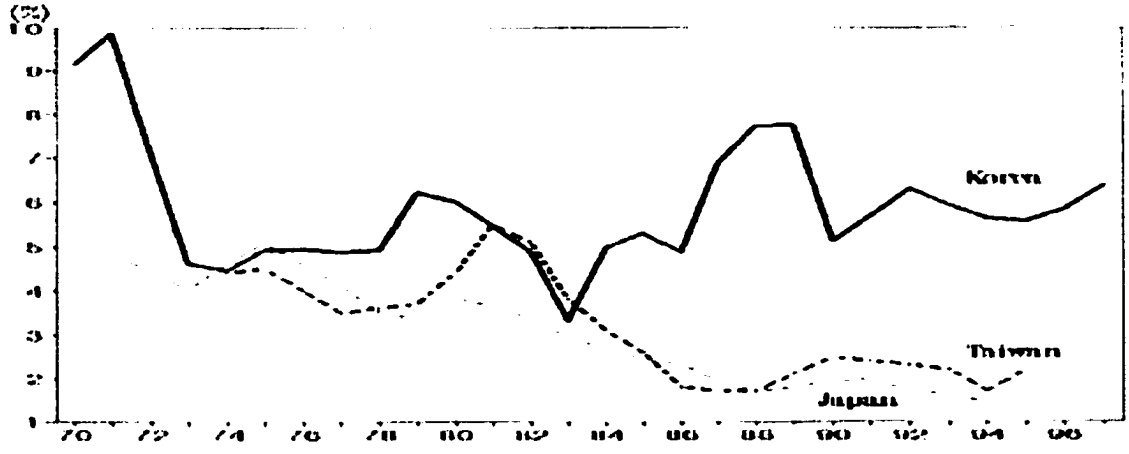
(percent)

	Korea		United States	Japan	Taiwan
	Manufacturing	**30 Chaebols**			
1991	307	403	147	209	98
1992	319	426	168	202	93
1993	295	398	175	202	88
1994	303	403	167	196	87
1995	287	388	160	196	86
1996	317	450	154	187	.....

Note: Non-financial subsidiaries of 30 largest *Chaebols*.
Source: Fair Trade Commission: Quoted in Gobat (1998, p.15).

The high debt burden also resulted in high debt serving costs (See Figure IV-4). Interest expense in the manufacturing sector averaged 5-6 percent of sales, roughly three times as large as Japan and Taiwan. Given the high debt leverage of the corporate sector, a large share of operating earnings went to servicing their debts. The more debts the *Chaebols* had, the more interest payments were made to service the firm's debt.

<Figure IV-4> International Comparison of Corporate Debt Service Costs as Percentage of Sales



Note: Manufacturing sector.
Source: Bank of Korea, *Financial Statement Analysis*: Quoted in Nam et al., 1999 p.7.

Moreover, the *Chaebols'* high leverage problem was worsened by the excessive exposure to the short-term external debt. During 1994-96, Korean companies implemented gigantic facility expansions, which relied heavily on borrowing from domestic financial institutions. Korean banks met the increased demand for funds by turning to foreign borrowing, often at short maturities[15]. As a result, in Korea, short-term debt with a maturity of less than one-year accounted for 62.2 percent of the total foreign debt of US$ 100 billion at the end of 1996 and

[15] Several factors explain the reliance on short-term capital inflows. For details, see Balino and Ubide, "The Korean Financial Crisis of 1997 – A Strategy of Financial Sector Reform", IMF, 1999.

61.0 percent of US$ 104.0 billion as of September 1997 (See Table IV-5). Over the course of capital account liberalisation occurring since the early 1990s, short-term capital inflows were liberalised in advance of long-term inflows (Nam et al., 1999). Consequently, Korean banks borrowed from abroad in the short-term, and lent funds in the long-term. In other words, domestic banks channelling external short-term funds to long-term loans that financed facility investments by the corporations caused a serious maturity mismatch problem[16]. This maturity mismatch resulted in the inability of the financial institutions to roll over their short-term foreign borrowings which, in turn, eventually triggered the financial crisis.

<Table IV-5> Details of Korea's Foreign Debt before the Crisis

(US$ billion, percent)

	1995. 12	1996. 12	1997. 9
Total Foreign Debt	45.3	100.0	104.0
Short-term Debt/Total Foreign Debt	57.8	62.2	61.0

Source: Yoo and Moon, 1999 p.11-12.

In summary, moral hazard-driven high financial leverage and heavy exposure to short-term debt of the *Chaebols* were both extremely vulnerable to cyclical shocks as well as to changes in market expectations. Such vulnerability was worsened by an adverse shock in terms of trade occurring in the first half of 1996. As a result, 14 out of the top 30 largest *Chaebols* ran into serious liquidity problems before the financial crisis hit the country in late 1997. These large bankruptcies significantly damaged the asset position of financial institutions and undermined foreign investors' confidence making them rush out of the country. The corporate insolvency problem, driven by the high indebtedness of the *Chaebols*, translated into domestic financial crisis, and ultimately caused the external liquidity crisis.

[15] For more details, see Nam et al, "Corporate Governance in Korea", Korea Development Institute, 1999.

4.2 Investment Inefficacy

Investments by the *Chaebols* into high-risk business projects are also regarded as one of the key factors that caused the Korean financial crisis. During 1994-96, Korean corporations undertook a major investment expansion, particularly in the manufacturing sector. An example of this is the chemical industry, where Korea added almost as much new capacity between 1990 and 1997 as the whole of Western Europe with a goal of increasing their market share in the markets, even though world markets for many products were already glutted (The McKinsey No.4, 1998). This huge capacity expansion of *Chaebols* was manageable so long as the economy was growing, even though returns on investment were often low[17] due to their over capacity, driven by the moral hazard and ruthless competition among large *Chaebols*.

The investment boom during 1994-96, however, turned out to be unsustainable when the terms of trade deteriorated about 20 percent in the first half of 1996, the largest drop since the first oil shock of 1974 (Haggard and Mo, 2000). The sharp fall in export prices, mainly reflecting the oversupply in the semiconductor market and a decline in foreign demand, resulted in substantial losses in the export sector. This huge deterioration of the terms of trade severely damaged *Chaebols'* profitability, which was potentially dangerous given the over leveraged and over invested structure of the Korean corporate sectors. As a result, starting from the beginning of 1997, a number of the highly leveraged *Chaebols* went into bankruptcy dragged down by a substantial debt burden. These massive bankruptcies inevitably undermined the soundness of financial institutions, and the financial crisis quickly degenerated into a full economic crisis.

[17] According to Corsetti et al. (1998), with a prime rate in local currency that before the crisis was as high as 12 percent, the return on invested capital (ROIC) for Korean *Chaebols* was well below the cost of capital in the 1992-96 period. For example, in the case of Hanbo, Sammi and Jinro (the first *Chaebols* to collapse in 1997) the ROIC at the end of 1996 was as low as 1.7 percent, 3.2 percent and 1.9 percent respectively.

4.2.1. Motives for Excessive Investment

There are six factors that encouraged the *Chaebols'* excessive investment business practice. First, the government's implicit risk sharing with *Chaebols,* which resulted in a serious problem of moral hazard, was one of the most critical motivations for the excessive investment of the *Chaebol.* The consequence of this close government-business relationship induced the investment inefficiency of the *Chaebols.* In other words, the myth of "too big to fail" allowed the *Chaebol* groups to set a goal of size maximization at the expense of more rational management objectives. Even with low expected returns, risky investment became inevitable when the *Chaebols* determined that they were protected from the risks of investment losses. Due to their ability to simply walk away from failure, *Chaebols* indulged in over investment behaviour.

Second, in Korea, the government policy had always been devoted to the growth of *Chaebols* with the belief that large-scale firms had an advantage in global competition. Accordingly, business firms pursued size-oriented business strategies to meet the government's need. Business decisions were predicted, therefore, on the company being either 'strong' or 'big' enough to survive, instead of making the rational or right business decision (Kim, 1997). Thus, the management goals of firms were focused on size and volume, instead of achieving technological development for productivity growth. The result of *Chaebol's* expansion strategy was over investment in the economy, especially in the manufacturing sector (Haggard and Mo, 2000). The *Chaebols* were eager to expand plant capacity in the hope of having more market share and achieving lower production costs due to economies of scale[18].

[18] Economies of scale is achieved when average costs are reduced through the production of a single item in large quantities (Lim, 1998).

According to Park (1999), the *Chaebols'* focus on size was the result of two factors. One is the regulation of price and entry to markets, and the other is the existence of huge demand in the economy. Price regulations were implemented based on the cost plus pricing that essentially guaranteed a fixed margin on product sales. Consequently, an increase in business volume in times of high demand, entry barriers, and price regulation automatically guaranteed an increase in operating profits to the *Chaebols*.

Third, the high competition among the *Chaebols* to have more market share and not to fall behind rivals stimulated their investment. The *Chaebols* considered an increase of market share to be more important than the rate of profit. As a result, two or more groups often simultaneously made large-scale investments in the same industrial fields in order to increase their own market share.

Fourth, the cost of capital below market price encouraged *Chaebols'* investment in the capacity expansion. Large *Chaebols* had more chance to get the favourable credit from the government due to their gigantic size. Thus, credit was particularly distributed to the *Chaebols* in several of the government's strategic industries, including semiconductors, consumer electronics, steel, automobile, and petrochemicals. For example, during the heavy chemical industry promotion drive by the government in the 1970s, the government directed banks and non-banking financial institutions to supply more than 50 percent of total domestic credit as a heavily subsidised loan (Nam et al., 1999). In Korea, the problem was compounded by the government's attempt to pick winners by directing cheap credit toward favoured large industries (The Economist, 1997).

Fifth, managerial desire for maximization of the size of their firm induced *Chaebols'* investment. According to Lee (1999), one of the most important causes for the decline of the

firms has to do with wrong strategic business decisions made by the owner, especially by the second-generation owner-manager who inherited the company from his father. The typical behaviour and motivation of the second-generation owner-manager includes a very aggressive mind-set and desire. A new manager-owner feels he must prove not only that he is as good as his father but also that he can achieve something new and different. Such a mentality leads to careless expansion into new business areas, often putting the whole group into jeopardy. Samsung's decision to enter the automobile business in 1995, when the domestic market was already oversupplied by four established manufacturers, is one good example. Under the second-generation owner-manager President Lee's control, nearly US$ 2 billion was poured into the new business. However, due to the already glutted domestic market situation, Samsung Motors bankrupted with US$ 1.4 billion debt in 1998.

Finally, the *Chaebols* often made huge speculative investments in real estate for either business or non-business use, because it is often possible in Korea to achieve enormous amounts of profit from increases in real estate prices. In this manner, according to Kim (2000), the owners can earn large margins from the rise in real estate price. They argue that according to the closing account at the end of 1997, the listed book value of real estate possessed by business firms was approximately 31.8 trillion *Won*. Since the official price of that real estate was about 53.8 trillion *Won*, if their assets were to be re-estimated, they would be expected to have a margin of about 22 trillion *Won*. Unlike other East Asian countries, however, this real estate bubble in Korea had a relatively small impact on the onset of the crisis.

There are many factors that caused investment inefficiency of *Chaebol*, but the fundamental aspect of the *Chaebols'* motivations for over-investment lies in moral hazard, reflecting the implicit assumption that large corporations were "too big to fail". In other words,

the myth of "too big to fail" allowed the *Chaebol* groups to set a goal of size maximization, at the expense of more rational management objectives. Even with low expected returns, excessively risky investment became inevitable when the *Chaebols* determined that they were protected from the risks of investment losses. Due to their ability to simply walk away from failure, *Chaebol*s indulged in over investment behaviour.

4.2.2 Investment Trends of the *Chaebols*

The *Chaebols'* investment inefficiency problem can be narrowed down into excessive-capacity and declining profitability. In terms of excessive-capacity, first of all, too much investment led to excessive capacity in many industrial sectors. For example, makers of rolled aluminium suffered from about 60 percent over capacity in 1997. Korean automakers, meanwhile, used just 40 percent of their 4.5-million-unit annual capacity at the same period (McKinsey Quarterly 1998 No.4, 1998). In terms of the profit rate, second of all, the ratio of equity of the manufacturing firms in 1996 fell dramatically to 2.0 percent as against 11.0 percent the year before, and deteriorated further to register negative 4.2 percent in 1997 (Lee, 1999).

According to Haggard and Mo (2000), the Korean firms' subsequent insolvency is to be found in the investment boom of 1994-1996. During these three years, facility investment in manufacturing rose by 38.5 percent per year (See Table IV-6). Investment was particularly robust in 1994 and 1995, when it grew at rates of 56.2 and 43.5 percent respectively. The majority of investment (65.7 percent) went to expand existing production lines, and a relatively small amount was allocated to other sectors, such as corporate restructuring and rationalizing. Moreover, investments in the heavy chemical industry grew at the annual rate of 43.1 percent while the rate growth for light industries was only 15 percent. In terms of firms size, large firms – rather than small and medium-sized firms – set the pace. Investments by large enterprises grew 45.7 percent while small and medium-sized enterprises increased their investments by 17.7 percent. In summary, this was a boom dominated by real manufacturing investment on the part of the large *Chaebols* in heavy industries: automobiles, petrochemicals, steel and electronics.

<Table IV-6 > Cycles of Facility Investment

(percent)

	1972-1979	1980-1982	1983-1991	1992-1993	1994-1996	1997-1998
Average Growth Rate						
All Industries	41.8	1.3	20.0	-1.0	30.1	-18.8
Manufacturing	41.3	-11.3	29.6	-8.9	38.5	-29.0
Heavy and Chemical Industry	39.9	-11.2	32.0	-10.8	43.1	-28.6
Light Industry	46.8	-8.2	22.5	0.9	15.0	-32.0
Large Enterprises	39.6	0.3	28.7	-7.6	45.7	-11.6
Small Medium Enterprises	53.2	-22.0	24.0	-10.5	17.7	10.5
Non-Manufacturing	42.7	21.8	10.0	15.5	17.3	1.1
Reason for Investment (Manufacturing)						
Capacity Expansion	62.9	62.9	69.6	61.2	65.7	66.5
Rationalisation	20.7	20.7	17.3	20.1	15.5	14.7
Pollution Control	4.1	4.1	1.1	2.5	2.5	1.7
Research and Development Facilities	3.6	3.6	4.3	6.6	6.2	8.4
Others	8.6	8.6	8.5	9.7	10.1	8.9
Sources of Funds (Manufacturing)						
External Financing	76.4	76.4	65.8	68.7	71.7	72.7
Bank Loans	20.1	20.1	31.0	31.5	29.5	32.6
Foreign Currency Borrowing	12.9	12.9	12.1	10.3	20.4	11.4
Internal Financing	23.6	23.6	34.2	31.3	28.3	27.3

Source: Korea Development Bank, *Survey of Facility Investment Plans* (Seoul), various issues: Quoted in Haggard and Mo (2000, p.201).

Haggard and Mo (2000) argue that compared with the two previous episodes of rapid investment growth (1972-79, 1983-91), the 1994-1996 period displays two distinguishing features. First, the emphasis on manufacturing and large enterprises was even more marked than in the past. Second, dependence on foreign capital was much higher in 1994-1996 (20.4 percent) than it had been during 1972-1979, when it accounted for only 12.9 percent of the total investment, or 1983-1991, when it financed 12.1 percent.

There are some studies analyzing *Chaebol* investment trends. For example, Hahn's (1999) argues that *Chaebols'* over investment behaviour is based on moral hazard. Using data from the financial statements of 586 listed companies in Korea during the 1992-1997 period, he

analyses the investment behaviour of firms. By using a modified sales accelerator model, this study shows that firms with the expectation of government protection invested more than those firms without such expectation. It also shows that firms with such expectations are more likely to increase investments as the degree of uncertainty increases rather than those that cannot be protected from investment losses. The top ranking *Chaebols* maintain higher investment rates than those of other group-affiliated firms or independent firms. Thus, the results obtain consistency with the story of the excessive risk-taking behaviour of top ranking *Chaebols*, in so far as the firms are grouped according to the characteristic that reflect the extent of government protection[19].

Another study, Eo (1999) runs a regression analysis using both a logit model and a probit model with the 1993-1997 data of 35 *Chaebol* groups including eighteen bankrupt groups in order to analyse *Chaebols'* over investment behaviour. In his study, the dummy variable of bankruptcy/non-bankruptcy is used as a dependent variable while the average annual growth rate of tangible fixed assets (GTFA) is used as one of the independent variables. From the analysis, GTFA is shown to be positively related to the probability of bankruptcy and that the variable is also highly significant (See Table IV-7). The rate of increase in tangible fixed assets for the top 35 *Chaebols* in two years from 1995 to 1997 are much higher than the rates of increase in the previous two years from 1993 to 1995. There are no exceptions even if the *Chaebols* are categorized into three different groups according to their rankings. By looking at this sharp rise in the rate of increase in the latter two years, compared with former two years, it can then be said that the *Chaebol* groups aggressively increased their investment.

[19] See Hahn, C.H., "Implicit Loss-Protection and the Investment Behaviour of Korean *Chaebols*", Korea Development Institute, 1999.

<Table IV-7 > Tangible Fixed Assets of the 35 Largest *Chaebols*

(billion *Won*)

		1993	1995	1997	Growth Rate (%) (93-95)	Growth Rate (%) (95-97)	Growth Rate (%) (93-97)
Top 5	**Total**	31,985	44,609	75,826			
	Average	6,397	8,922	15,165	16.6331	26.5254	21.5792
	%	51.6	52.0	53.9			
Top 6-10	**Total**	14,558	19,106	28,384			
	Average	2,912	3,821	5,677	13.5918	19.7913	16.6915
	%	23.5	22.3	20.2			
Top11-35	**Total**	15,412	21,995	36,442			
	Average	616	880	1,458	17.7839	25.2448	21.5144
	%	24.9	25.7	25.9			
Top 35	**Total**	61,955	85,710	140,652	16.2277	24.7659	20.4968
	Average	1,770	2,449	4,019			

Source: Eo, 1999 p.23

In summary, the massive capacity expansion of the large Korean conglomerates made *Chaebols* extremely vulnerable to cyclical shocks as well as to changes in market expectations. This massive capacity expansion of the *Chaebols* was conducted under the impression that the government would do whatever was needed to facilitate the expansion, since the government policy had always been devoted to the growth of *Chaebols* with the belief that large-scale firms have an advantage in global competition. Krugman (1998) argues that this implicit guarantee of government to the corporate sector and the inadequate regulation of financial intermediaries in Asian countries lead to moral hazard driven over-investment and asset bubbles, so that Asian countries under those conditions were inevitably vulnerable to the financial crisis.

4.3 Extensive Diversification

The extensive diversification strategy of the *Chaebols,* often described as the "octopus tentacles" strategy in the Korean media, was also one of the main culprits leading to the outbreak of the financial crisis in Korea. Many critics argue that the diversification strategies of the *Chaebols* failed to consider economic efficiency and resulted in excessive, debt-fueled diversification unsustainable in economic downturns (The Business Week, 1998).

The *Chaebols* operate in a wide series of businesses ranging from electronics, shipbuilding, and construction to publishing companies, baseball teams, ski resorts, and hotels. Table IV-8 provides the summary statistics about the largely diversified top 30 *Chaebol* from 1987 to 1997. On average, the top 30 *Chaebols* own about 27 subsidiaries in 20 different industries in 1997. Moreover, the top 5 *Chaebols* are particularly diversified in that they had on average 52 affiliates competing in 30 different industries in the same year. The number of affiliates belonging to each *Chaebol* exceeds the number of lines of businesses because they diversify through the creation of new firms and the acquisition of existing firms.

Nevertheless, the Korean *Chaebol* is not the only conglomerate in the world market engaging in multiple-line businesses which have a significant effect in economic activity. Montgomery (1994) shows that, on average, the top 500 U.S. firms engage in 10.9 industries, and among them, 40 companies engage in more than 30 industries. Thus, diversification of large corporations is even pronounced in the developed countries. Despite this fact, the level of diversification in the *Chaebols* is rather high compared to that in the U.S., taking into consideration the differences between the 2-digit and 4-digit level of industry classification[20].

[20] For more details, see Hwang, I.H., "Diversification and Restructuring of the Korean Business Groups", Korea Economic Research Institute, 2000.

What is unusual about the *Chaebols* compared with their foreign competitors is that *Chaebols* are more diversified into unrelated sectors (See Table IV-9). In other words, Korean *Chaebols* tend to go into unrelated areas whenever possible in the name of diversification, even though the new area is not related to the group's core competence.

<Table IV-8> Diversification of the Top 30 *Chaebos*, 1987-1997

	1987	1993	1994	1995	1996	1997
Average Numbers of Affiliates	16.4	20.1	20.5	20.8	22.3	27.3
	N/A	<41.6>	<41.6>	<41.4>	<41.2>	<52.4>
Average Numbers of		18.8	19.1	18.5	18.8	19.8
Industries Engaged	N/A	(31.2)	(30.4)	(29.8)	(29.6)	(30.2)
Total Number of Affiliates	509	604	616	623	669	819

Note 1. The figures in < > denote the number of affiliates that the top 5 *Chaebols* own.
2.The figures in ( ) denote the number of industries that the top 5 *Chaebols* engage in.
Sources: Hwang, 2000 p.5.

<Table IV-9 > International Comparison of Diversification by Big Businesses

(percent)

Types of Diversification	Korea (1989)	Japan (1973)	U.S. (1969)	Italy (1970)	France (1970)	U.K. (1970)	West Germany (1970)
Specialized	8.2	16.9	6.2	10.0	16.0	6.0	22.0
Semi-specialized	28.6	36.4	29.2	33.0	32.0	34.0	22.0
Related	6.1	39.9	45.2	52.0	42.0	54.0	38.0
Unrelated	57.1	6.8	19.4	5.0	10.0	6.0	18.0

Note: 1. Forty-nine *Chaebols* for Korea, 118 firms for Japan, 100 firms for the other countries.
2. The sources above are not the latest due to the limitation of my research. Yet, this table clearly shows that *Chaebols* are diversified into unrelated sectors in a comparative way.
Sources: Yoo and Lim, 1997: Quoted in Gobat (1998, p.9)

There are many different theories and arguments on the reasons for diversification of business corporations. Firstly, according to the agency view, motives for diversification lie in the manager's pursuit of private benefit (Jenson, 1986). Unlike stockholders who pursue firm value or profit maximization, managers tend to maximize their profit by increasing the size of the firm through investment in various business areas. Secondly, the market power view (or the monopoly power hypothesis) stresses that the motives for diversification encompass a desire to limit any potential competitions with other firms (Hwang, 2000). In other words, the *Chaebols* want to monopolize their market power by using all possible anti-competitive ways such as cross-subsidization, mutual forbearance, and reciprocal buying.

Thirdly, the transaction cost hypothesis argues that firms diversify to internalize the high costs involved with market transaction resulting from market imperfection, and thus may predict the positive linkage (Hwang, 2000). By doing so, firms are able to achieve greater allocative efficiency and competitive advantage vis-à-vis other firms in the same market. Under certain circumstances, transactions within a group of firms are more efficient than transactions through the market or transaction through the internal organization of the firm.

Finally, the resource-based view argues that diversification is pursued to utilise unused resources effectively by expanding their business to earn more profit (Song and Cho, 1999). Imperfections in the market's ability to allocate resources efficiently causes business groups to diversify. Given an imperfect market, business groups can facilitate the resource allocation process using a diversification strategy. Since the Korean market is relatively small, a successful company that enters a saturated market with a relatively small scale of operation must soon find new business opportunities.

Some of these above theories may explain the reasons for diversification of Korean *Chaebols*. For example, Hwang (2000, p12) argues that the transaction cost and the resource-based view deserve special attention when explaining why Korean conglomerates are so extensively diversified.

> "Due to the relatively short history of capitalism and the discretionary policy of the government in Korea, market institutions for economic activity has been distorted. In addition, most of the firms have not as yet accumulated productive factors having high specificity that is sufficient enough to make it possible for them to yield high rates of return."

However, these theories are inadequate to see the overall picture of the diversification of *Chaebols*. The above arguments may be able to explicate the reasons for the diversification of the *Chaebols*, but they still cannot explain why *Chaebols* intended to diversify beyond their optimal limit. An often-cited criticism about the *Chaebols* is not just they pursue extensive diversification but that they pursue excessive diversification.

What factors played a primary role in the *Chaebols'* diversification strategy? This sub-section will prove that the essential aspect of the diversification of *Chaebols* lies in the moral hazard of the corporate sector. Then the *Chaebols'* diversification trends will be discussed in order to prove that the moral hazard driven *Chaebols'* extensive diversification was one of the structural weaknesses, which eventually caused the Korean financial crisis.

4.3.1 Motives for Extensive Diversification

There are many factors that encouraged the *Chaebols'* extensive diversification. First of all, the government's implicit risk partnership with business groups, resulting in the problem of the moral hazard, played a primary role in the *Chaebols'* extensive diversification. In Korea, the government pursued the *Chaebols'* diversification as a part of the national economic policy over the past three decades. Both the government and the *Chaebol* strove to create world-class large business groups that could effectively compete in the international market. As a result, the *Chaebols* could increase their size by means of diversification while under the impression that the government would support and protect the big businesses from both domestic and foreign competition. In other words, because of the government's implicit guarantees, the *Chaebols* could diversify in various industries without due regard to the level of risk. Therefore, the government's implicit guarantees, driven by the moral hazard, encouraged the *Chaebols* to diversify into many industries with little risk to themselves.

Furthermore, diversification had been a strategy for gaining independence and autonomy from the state (Kim, 1997). Many *Chaebols* have undergone ownership changes in the past due to the government actions in the name of industry rationalization policy[21]. Given this political threat, *Chaebols* have exerted great effort to achieve maximization to make it difficult for the government to declare them bankrupt or to dismantle their groups, due to the economic side-effects that would follow such government action. Thus, the *Chaebols* diversified into non-banking financial institutions (NBFI), such as insurance, securities, and short-term finance

[21] In fact, many *Chaebols* had undergone ownership changes due to the government's industrial rationalization policy in the past three decades. For instance, Kukje group, the seventh-largest *Chaebol* in 1985, disbanded for reasons including "reckless management", and "exceedingly high rates of debt" (Kim, 1997 p201). Hanil, which took over the Kukje companies, jumped from the twenty-third to the fourteenth-largest *Chaebol* as a result of the takeover.

companies, in order to become less dependent on the government for capital. Historically, *Chaebols* depended on the government for their necessary capital, because the banks belonged to the state. The state controlled the private sector by controlling the financial institutions. *Chaebols* were prohibited from owning banks during the 1960s and 1970s. In other words, business conglomerates had to listen to the government in order to get their capital for the business. This policy remained in effect until 1981, when the Chun regime announced partial privatization of banks (Kim, 1997).

By diversifying into NBFIs, therefore, the *Chaebols* could use their affiliated NBFIs to finance the activities of other subsidiaries within their group in various ways: direct provision of funds, priority underwriting of securities issued by related subsidiaries, and other forms of unfair inter-group transaction. In other words, the NBFIs of the *Chaebols* allowed flexibility in cash flow for member companies and ready access to loans within the group. The *Chaebols* were able to become less dependent on the government by diversifying into NBFIs (Kim, 1997).

4.3.2 Diversification Trends of the *Chaebols*

Unlike the specialization trends of world-class firms, Korean *Chaebols* tended to go into unrelated areas whenever possible in the name of diversification, even though the new area was not related to the group's core competence. Such extensive diversification not only prevented a *Chaebol* group from developing core competence in the new business area, but also weakened competence in their existing business areas (Lee, 1999).

Despite enforcement of the government's *Chaebol* specialization policy, the number of the subsidiaries of the thirty largest *Chaebols* did not change considerably until 1995. As Table IV-10 reveals, the average number of subsidiaries of the 30 largest *Chaebols* in 1995 was 20.8, with a total number of 623 subsidiaries.

<Table IV-10> Number of Subsidiaries of the 30 Largest *Chaebols*

		1993	1994	1995	1996	1997	1998	1999
Top 5	**Total**	208	208	207	206	262	257	234
	Average	41.6	41.6	41.4	41.2	52.4	51.4	46.8
Top 6-10	**Total**	115	116	117	122	138	132	122
	Average	23.0	23.2	23.4	24.4	27.6	26.4	24.4
Top11-30	**Total**	281	292	299	341	419	415	330
	Average	14.1	14.6	15.0	17.1	21.0	20.8	16.5
Top 30	**Total**	604	616	623	669	819	804	686
	Average	20.1	20.5	20.8	22.3	27.3	26.8	22.9

Source: Bank of Korea, various years

The number of subsidiaries started to increase in 1996 and 1997. In 1996 alone, the total number of subsidiaries of the 30 largest *Chaebols* increased to 669 from 623 in the previous year. In 1997, the numbers of subsidiaries of the 30 largest *Chaebols* drastically increased to 819

from 669. The greatest increase was found in the number of the subsidiaries in the top five *Chaebol* groups; the average number of subsidiaries increased by approximately 20 percent in 1997. This number, however, slowly decreased from 1998 as a result of the massive *Chaebol* bankruptcies and the corporate restructuring program. During 1999, in particular, the number of subsidiaries of the 30 largest *Chaebols* sharply dropped to 686, from 804 in 1998.

The number of business lines[22] of the 30 largest *Chaebols* is shown in table IV-11. As can be seen, the number of business lines has gradually increased every year. In 1998, the top 5 *Chaebols* had an average of 31 business lines, top 6 to 10 *Chaebols* had an average of 22.6, and the rest of the lower ranking 20 *Chaebols* had an average of 16.5 business lines. The 30 largest *Chaebol* groups had operated in 20 different industries in average. Just by observing the numbers in table IV-11, it can be said that larger *Chaebol* groups are more diversified than smaller *Chaebol* groups. The top 5 *Chaebols* had twice as many different business lines, when compared with the 20 *Chaebols* from the ranking 11 to 30.

Simple indexes such as the number of subsidiaries or the number of business lines are not enough to properly measure the degree of diversification. Since only a few subsidiaries and industries account for most of the total sales of a *Chaebol* group[23], there is a need to examine the

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[22] According to Hwang (2000), the number of business lines is the simplest of diversification index. It disregards the relatedness of industries and the relative importance of a particular commodity in a business group, and directly shows the degree of diversification.

[23] Although *Chaebols* own a lot of subsidiaries operating in many different industries, most of their sales revenues are generated by a few core firms. Between 1988 and 1995, according to Chang and Park (1999), the four largest subsidiaries of the top 4 *Chaebols* generated an average of 79.0 percent of their total sales. Especially in the case of Samsung, the four largest firms, two of which were in the same industry (electronics), alone accounted for about 90 percent of sales – a striking concentration (rather than diversification) of activities given the number of its subsidiaries (55 as of 1995). Chang and Park (1999) argue that the same can be said of the smaller *Chaebols*, because the reliance on a small number of subsidiaries tends to increase as their size diminishes. For instance, in 1994, the *Chaebols* that ranked between the 6 and the 10 generated 72.6 percent of their sales from the 4 largest subsidiaries. In the case of the *Chaebols* ranking between the 11 and the 20, the 3 largest subsidiaries generated 72.1 percent of their sales, and in the case of the *Chaebols* that ranked between the 21 and the 30, as much as 72.3 percent of the sales were generated by the 2 largest subsidiaries. For more details, see Chang and Park, "An Alternative Perspective on Post-1997 Corporate Reform in Korea", Korea Economic Research Institute, 1999.

industry specialization ratio[24] and the Berry index[25], to realize the diversification situation of the *Chaebol* groups and their characteristics.

<Table IV-11 > Number of Business Lines of the 30 Largest *Chaebols*

		1993	1994	1995	1996	1997	1998
Top 5	**Total**	156	152	149	148	151	155
	Average	31.2	30.4	29.8	29.6	30.2	31.0
Top 6-10	**Total**	110	113	118	129	123	113
	Average	22.0	22.6	23.6	25.8	24.6	22.6
Top 11-30	**Total**	283	307	289	326	321	331
	Average	14.2	15.4	14.5	14.8	16.1	16.6
Top 30	**Total**	549	572	556	603	595	599
	Average	18.8	19.1	18.5	18.8	19.8	20.0

Source: Bank of Korea, various years

The industry specialization ratio is a ratio of an industry that has the largest sales proportion in total sales of a group. The industry specialization ratio becomes 1 if the *Chaebol* group is perfectly specialized in one main industry. Smaller numbers indicate the firm is less specialized, or more diversified. Table IV-12 shows that a *Chaebol* group in a higher rank has a smaller industry specialization ratio, which means a group is less specialized or relatively more diversified. However, the growth rate is higher in the low-ranking groups, which means they are more rapidly diversified than the high-ranking groups.

[24] The industry specialization ratio is frequently used in empirical studies due to the simplicity of calculation and feasibility of gathering data. It fully reflects a group's dependency on its main industry. However, it does not show the degree of diversification. For more details on how to calculate the index, see Kim, K.H., "Comparative Analysis of Diversification and Performance of the business Groups", Yonsei Univ. 1993.

[25] The Berry index is simply a transformation of the Herfindahl index, which measures market concentration. Its strength is that it reflects the relative importance of all the industries in addition to the main industry. For more details on how to calculate the index, see Kim, K.H., "Comparative Analysis of Diversification and Performance of the business Groups", Yonsei Univ. 1993.

Table IV-13 shows that a *Chaebol* group with a higher rank has a higher Berry index, meaning the degree of diversification for the *Chaebol* groups has continued to increase. Although the table shows that high-ranking *Chaebols* are more diversified than low-ranking *Chaebols*, the rate of increase in the Berry index is higher in low-ranking *Chaebols* than in high-ranking *Chaebols*, as in an analysis with the specialization index.

<Table IV-12 > Industry Specialization Ratios of the 35 Largest *Chaebols*

(percent)

	1993	1995	1997	Average	Growth Rate (93-97)	Average annual Growth Rate
Top 5	0.42991	0.43265	0.42800	0.43019	-0.444	-0.111
Top 6-10	0.52472	0.55321	0.51980	0.53257	-0.937	-0.235
Top 11-35	0.65949	0.58880	0.53509	0.59446	-18.864	-5.226
Top 35	0.60744	0.56141	0.51709	0.56198	-14.874	-4.026

Source: Eo, 1999 p.34.

<Table IV-13 > Berry Index of the 35 Largest *Chaebols*

(percent)

	1993	1995	1997	Average	Growth Rate (93-97)	Average annual Growth Rate
Top 5	0.70608	0.69593	0.70752	0.70318	0.204	0.051
Top 6-10	0.58024	0.56821	0.60695	0.58513	4.604	1.125
Top 11-35	0.45871	0.54539	0.59548	0.53319	29.817	6.524
Top 35	0.51141	0.57015	0.61365	0.56507	19.991	4.556

Source: Eo, 1999 p.37.

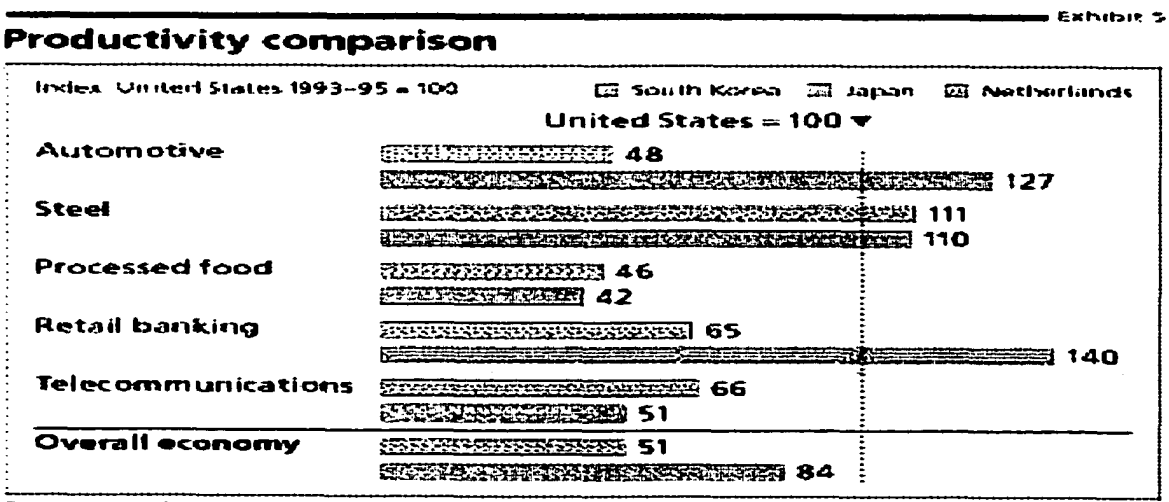
In summary, the *Chaebols* intended to diversify beyond their optimal limit based on the government's implicit risk partnership with business groups, resulting in the problem of moral hazard. In other words, because of the government's implicit guarantees, *Chaebols* could diversify in various industries without due regard to the level of risk. Under this "guaranteed" circumstance, business conglomerates subsidized unprofitable subsidiaries by transferring funds across *Chaebol* groups and provided cross-guarantees on debts among affiliates, which eventually jeopardized the entire group (Lee, 1999). The diversified *Chaebol* structure acted as an exit barrier to unprofitable businesses in the group and eventually undermined the viability of the whole system. Therefore, the extensive diversification strategies of the *Chaebols*, driven by moral hazard, weakened the entire companies by losing economic efficiency, and eventually caused the financial crisis.

4.4 Low Productivity and Profitability

The low productivity and profitability of *Chaebols* are also critical factors on the path to the Korean financial crisis. In terms of productivity, although most of Korea's investment had been directed into manufacturing, giving the country almost as much manufacturing capital stock per capita as the U.S., labour and capital productivity in most Korean manufacturing sectors stood at less than half of the U.S. levels between 1993 and 1995 (See Figure IV-5 and Figure IV-6). Before the financial crisis, Krugman (1994) argued that Asian economic growth is based mainly on massive inputs of capital and labour rather than productivity growth and thus will not be sustainable over a long period. In this sense, the crisis was structural.

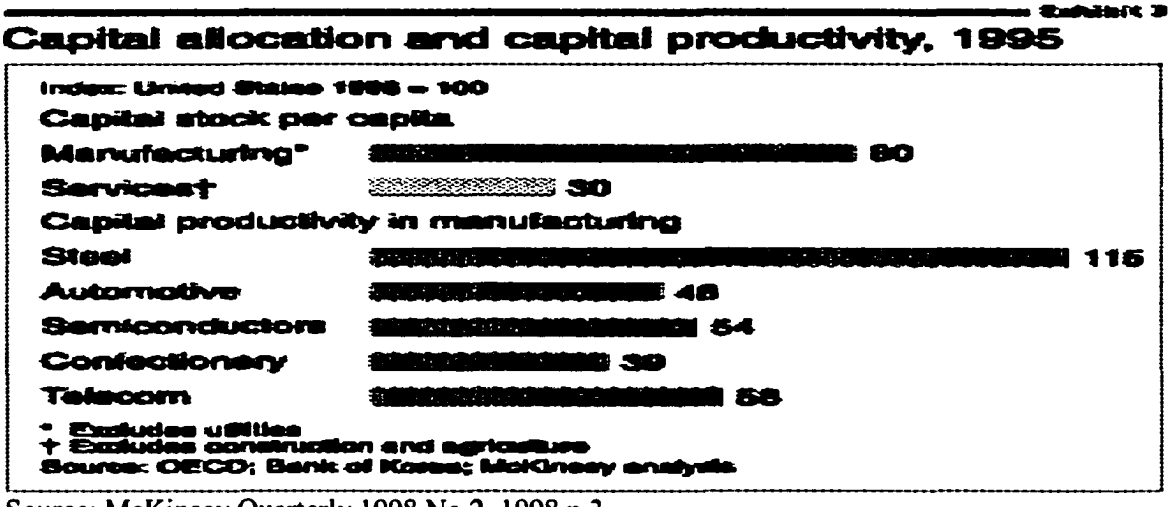
In terms of low profitability, the economic recession and the huge deterioration of the terms of trade in 1996, particularly in the semiconductor manufacturing industry, negatively influenced on the profitability of the Korean business conglomerates. As a result, although total sales of the 30 largest *Chaebol* groups increased by 16.2 percent, their net income decreased by more than 90 percent in 1996 (See Table IV-14).

<Figure IV-5> Productivity Comparison



Source: McKinsey Quarterly 1998 No.4, 1998 p.74.

<Figure IV-6> Capital allocation and Capital Productivity 1995



Source: McKinsey Quarterly 1998 No.2, 1998 p.3.

<Table IV-14> Business Performance of the 30 Largest *Chaebols*, 1995-1996

(trillion *Won*, percent)

	Total Sales			Net Profit		
	1995	1996	Growth Rate	1995	1996	Growth Rate
Top 10	194.5	228.4	17.4	5.7	0.6	-82.7
Top 30	226.4	263.2	16.2	5.8	0.6	-90.1

Note: Except Hanbo and New Core group. The values are based on listed firms only.
Source: Samsung Economic Research Institute, 1998.

In addition to the economic recession, the rising wage costs in Korea contributed to the eroding profitability of the firms, so that the corporate sector increasingly suffered from declining competitiveness and profits in the world market[26]. Domestic wages grew faster than labour productivity during the last decade (See Table IV-15), making Korean wages higher than those of Hong Kong, Singapore and Taiwan (See Table IV-16). As a result, Korean companies'

[26] Korean comparative advantages as a low wage country disappeared with the rise of new competitors, such as China, in the world market. Besides, Korean products could not afford to compete with the products from an advanced country, such as Japan, in terms of quality and product differentiation (Lee, 1999).

profitability deteriorated much below that of firms in economies having significantly lower financial costs, such as Japan, Taiwan, and the U.S.[27] (See Table IV-17). Therefore, with wages higher than labour productivity and interest rates higher than capital productivity over the past 10 years, companies were unable to accumulate profits. Given the over-leveraged and over-invested structure of the Korean corporate sector, this decreasing profitability eventually made Korean firms very vulnerable to any shock; low profit decreased the ability to service the high debt that Korean companies accumulated.

<Table IV-15 > Wage and Labour Productivity Increase

(percent)

	1971-1986	1987-1995
Wages Growth	21.2	16.1
Productivity Growth	26.8	13.1

Source: Korea Productivity Centre Estimates: Quoted in Cho (1999b, p.6).

<Table IV-16 > Hourly Wage in the Manufacturing Sector and Per Capita Income

(US$)

	Hong Kong	Japan	Korea	Singapore	Taiwan	U.S.
Hourly wage:						
1985	1.73	6.34	1.23	2.47	1.50	13.01
1990	3.20	12.80	3.71	3.78	3.93	14.91
1995	4.82	23.66	7.40	7.28	5.82	17.20
Per Capita Income:						
1995	22,990	39,640	9,700	26,730	12,293	26,980

Source: U.S. Bureau of Labour Statistics, 1995: Quoted in Cho (1999b, p.6).

[27]Cho (1999b) argues that real profitability, disguised by accounting practices, may have been much lower than the statistics suggest.

<Table IV-17 > Corporate Profitability in Manufacturing, 1989-1993

(percent)

	Japan	Korea	Taiwan	U.S.
Current Profit/Sales	3.38	1.97	3.72	3.06
Current Profit/Assets	3.54	1.99	3.50	6.23
Net Profit/Capital	N/A	5.03	11.77	N/A

Source: Bank of Korea, "*Corporate Financial Statement Analysis*", various issues: Quoted in Cho (1999b, p.7).

In summary, the fundamental aspect of the *Chaebols'* low profitability lies in their structural weaknesses. The huge debt-fueled capacity expansion of *Chaebols* was manageable so long as the economy was growing, even though investment returns were often too low to service the cost of capital. The huge deterioration of the terms of trade, however, severely damaged *Chaebols'* profitability, which was potentially dangerous given the over leveraged and over invested structure of the Korean corporate sector. The diversification strategies of the *Chaebols* often failed to consider economic efficiency causing excessive, debt-fueled expansion unsustainable in economic downturns. Starting from the beginning of 1997, therefore, a number of the highly leveraged *Chaebols* went into bankruptcy, dragged down by excessive investment and a substantial debt burden.

The following sub-sections analyze the low productivity and profitability of the Korean firms in detail. By doing this, the sub-sections will explain that the large *Chaebols* were already on the path to an economic disaster years before the actual financial crisis hit the country.

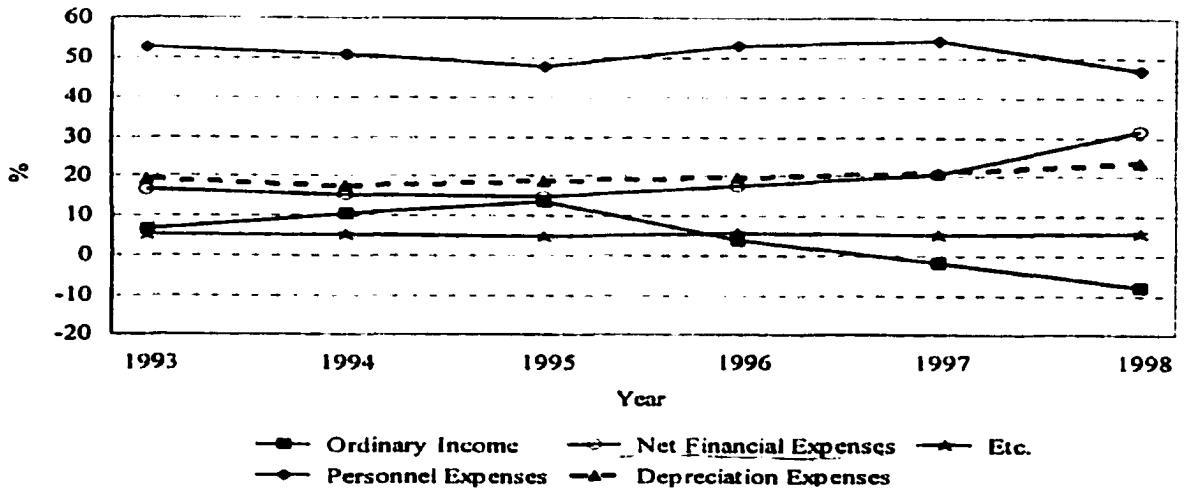
4.4.1 Low Productivity

According to Bello and Rosenfeld (1990), Korea's impressive growth over the past three decades can be explained largely by the fact that its people worked long hours and saved a great deal, leading to the rapid accumulation of capital. Most of Korea's investment has been directed into manufacturing, giving the country almost as much manufacturing capital stock per capita as the United States. Yet capital productivity in many manufacturing sectors is only half of U.S. levels. In semiconductor manufacturing, for example, Korean firms use machines similar to those employed by U.S. companies, but produce low-value DRAM chips instead of more complex microprocessors. Within the DRAM industry, Micron, the largest U.S. manufacturer, boasts capital productivity 50 percent higher than that of the average Korean maker. Similarly, Korea's failure to implement lean manufacturing in the automotive industry means its car makers produce only half as many vehicles as their Japanese counterparts in a similar plant (McKinsey No.2, 1998).

Factor productivity was low in Korea. The productivity in the manufacturing industry can be seen collectively by analysing the rate of value added. As can be seen from Figure IV-7, ordinary income began to decrease rapidly after 1995. In 1998, the ratio of personnel expenses (labour cost) to value added fell to 47.1 percent from 54.5 percent in 1997. However, the ratio of financial expenses (capital cost from borrowing) to value added jumped suddenly to 31.7 in 1998 from 20.8 percent in 1997 and the ratio of ordinary income to value added sharply dropped to – negative 8.1 percent in 1998 from negative 1.8 percent in 1997. This problem can be attributed to the increase in labour costs and net financial expenses, because the financial expense ratio in Korea was over three times the ratios in Japan and the U.S., due to the high market interest rate (See Figure IV-3). Productivity, however, has not improved equally to back-up these high costs

(See Table IV-16). It can be said, therefore, that the business performance of the firms in Korea continuously worsened as a result of wages higher than labour productivity and interest rates higher than capital productivity.

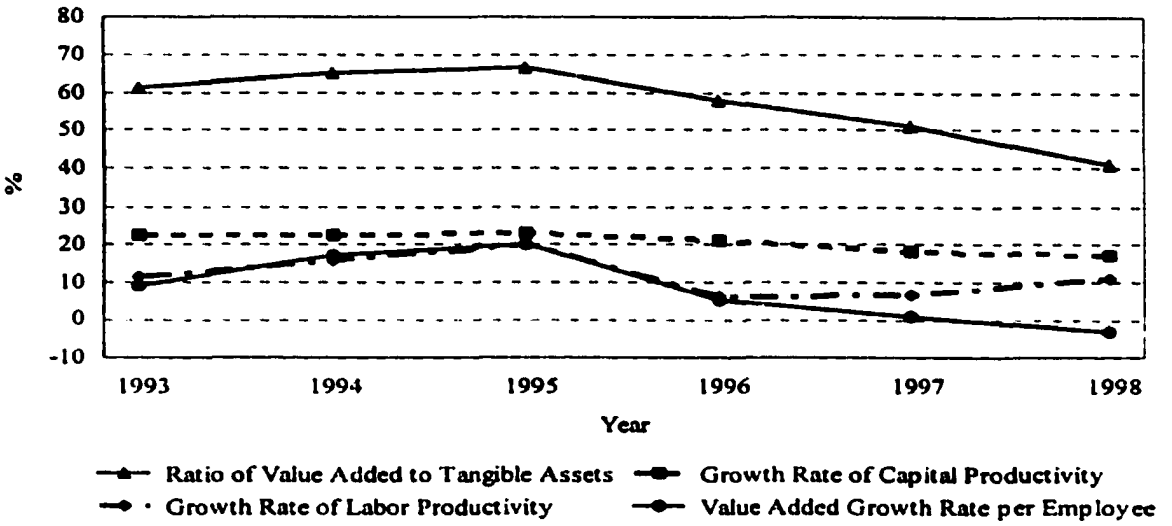
<Figure IV-7> Components of Value Added in the Manufacturing Industry



Source: Bank of Korea, May 1998.
Korea Development Bank, 1999 p.71.

As Figure IV-8 shows, the value added growth rate per employee for the manufacturing sector began to fall sharply from 1995. In 1998, it recorded a stiff drop from 0.99 percent in 1997 to -3.12 percent, due to the heavy losses in ordinary income from lagging sales, slim margins, and a huge amount of write-offs. The growth rate of capital productivity (or value added to total liabilities and stockholders' equity) gradually decreased from 1995 and recorded a slight drop from 18.2 percent in 1997 to 17.1 percent in 1998. This declining productivity can be explained by both the setback in total value added from low profitability in the prolonged economic recession, together with only a 2.9 percent increase in total liabilities and stockholders' equity.

<Figure IV-8> Major Productivity Indicators in the Manufacturing Industry



Source: Korea Development Bank, 1999 p.66.

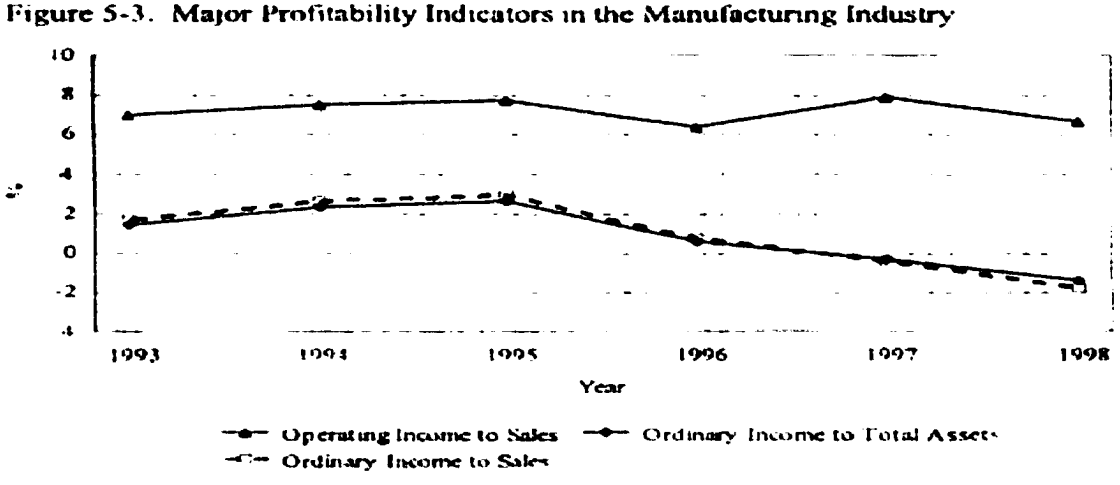
In contrast, the growth rate of labour productivity, or value added per employee, slowly rose from 1996 after dropping sharply in 1995. Productivity increased to 11.1 percent in 1998 from 6.5 percent in 1997. However, this was due to a decrease in the number of employees as a result of restructuring and downsizing efforts carried out during 1998. In conclusion, although labour productivity showed an increase, the value added growth rate itself showed a drop from 23.0 percent in 1997 to 22.0 percent in 1998. This fall was largely attributed to the huge deficit in ordinary income, reflecting inadequate margins and the negligence of management on sales receivables. Also, the ratio of value added to tangible fixed assets, a supplementary ratio to the growth rate of capital productivity began to fall steeply from 1995 along with other productivity indicators. It reached its highest level of 66.8 percent in 1995 but fell as low as to 41.0 percent in 1998[28].

[28] For more details, see Korea Development Bank, "Analysis of Financial Data for 1998", 1999.

4.4.2 Low Profitability

In 1997, for the first time ever since the Korea Development Bank began its financial analysis in 1958, Korean firms recorded a deficit in ordinary income compared to total assets (Korea Development Bank, 1999). Figure IV-9 shows that after all three profitability indicators in the manufacturing industry recorded the highest values in 1995 they rapidly began to downturn. The ratio of ordinary income to sales and the ratio of ordinary income to total assets began to drop steeply from 1995 and started to record deficits from 1997.

<Figure IV-9> Major Profitability Indicators in the Manufacturing Industry



Source: Korea Development Bank, 1999 p.59.

The evidence of low profitability is also available at the firm level. Table IV-18 shows the long-term trend of the profit rates of the Korean companies over the 1980 to 1996 period. In general, the table describes the decreasing trend over the concerned period. In particular, for the large-sized firms (including most of the *Chaebol* firms) profit rates crashed from 13.3 percent during the 1985-1989 to 0.2 percent during the 1990-1996.

<Table IV-18 > Profit (Net Income) to Equity Ratio by Size of the Firms

(percent)

Year	Large	Medium	Small
80	-8.8	-4.4	-3.7
81	-0.2	0.8	2.3
82	-4.5	2.5	4.5
83	7.4	11.5	13.9
84	7.4	9.9	10.4
85	4.0	8.4	6.4
86	16.3	12.1	13.9
87	18.6	14.6	15.4
88	16.0	14.6	15.5
89	11.7	14.1	13.0
90	1.7	7.0	8.1
91	0.4	7.0	7.4
92	-2.0	1.2	1.4
93	2.8	3.5	2.9
94	4.6	5.9	5.0
95	-1.3	0.4	2.3
96	-4.5	-1.6	0.3
Averaged by period			
1980-1984	0.3	4.1	5.5
1985-1989	13.3	12.8	12.8
1990-1996	0.2	3.3	3.9
1980-1996	4.1	6.3	7.0
Standard Deviation			
1980's	9.2	6.6	6.5
1990's	3.1	3.4	3.0
1980-96	7.9	6.0	5.9

Source: Yoon, J. I., "A Study on the Return on Stockholders' Equity in Korea", Seoul National Univ., 1998: Quoted in Lee (1999, p.19).

Table IV-19 measures the short-term change of the profit rates particularly for the 10 and 30 largest *Chaebols* during the 1994-96 and depicts that over this period all the measures of profitability declined by a substantial margin for the 30 largest business groups. This trend is more clear-cut for the profitability measured using ordinary income rather than operating income. Ordinary income compared to stockholders' equity rates declined from 8.46 percent in 1994 to a mere 0.75 percent in 1996 for the 10 largest *Chaebols*.

<Table IV-19 > Changing Profitability of the *Chaebols*

A. Profitability of the 10 Largest *Chaebols* in Korea

(percent)

	1994	1995	1996
Operation Profit / Equity	15.37	28.95	24.66
Normal Profit / Equity	8.46	10.38	0.75
Operation Profit / Sales Revenue	6.22	6.23	4.7
Normal Profit / Sales Revenue	1.9	2.29	0.21
Operation Profit / Total Asset	6.34	6.74	5.02
Normal Profit / Total Asset	2.16	2.65	0.4

B. Profitability of the 30 Largest *Chaebols* in Korea

(percent)

	1994	1995	1996
Operation Profit / Equity	6.23	1.11	0.87
Normal Profit / Equity	0.31	0.42	0.09
Operation Profit / Sales Revenue	0.22	0.23	0.17
Normal Profit / Sales Revenue	0.07	0.09	0.02
Operation Profit / Total Asset	0.22	0.25	0.18
Normal Profit / Total Asset	0.07	0.09	0.02

Source: Cho, S. "The Large Corporate Groups in Korea", 1997: Quoted in Lee (1999, p.20).

Table IV-20 reveals the ratio of operating income to sales among Korean firms was higher than in the United States, Japan, and Taiwan[29]. However, the ordinary income to sales in Korea is exorbitantly lower when compared to these countries. This is because of the sharp increase in financial expenses from excess borrowing offset the favourable effect of foreign

[29] The main reason for the sales increase in 1997 was a favourable balance of trade due to exchange rate appreciation; this led to an increase in operating income as well (Bank of Korea, 1998).

currency debt translation. Therefore, non-operating income was lowered, although the Korean companies showed similar profitability in operating activities. This resulted in an ordinary income of –1.79 percent in 1998 compared to –0.42 percent in 1997 (Bank of Korea, 1998).

<Table IV-20 > International Comparison of Business Performance in the Manufacturing Industry

(percent)

Index	Financial Ratio	Korea	U.S.	Japan	Taiwan
Growth	**Sales Growth**	11.0	6.7	0.2	16.4
	Tangible Fixed Asset Growth	13.7	3.2	1.5	6.8
Profitability	**Operating Income to Sales**	7.9	7.4	3.6	7.3
	Ordinary Income to Sales	-0.4	8.3	3.4	5.1
Financial	**Equity Ratio**	20.2	39.4	34.1	53.9
Structure	**Current Ratio**	91.8	137.9	130.0	129.4
	Financial Expenses Ratio	6.4	-	1.0	2.2

Note: The values are based on 1997 for Korea, 1996 for Japan and U.S., and 1995 for Taiwan.
Source: Bank of Korea, May 1998 p.29-35.

Therefore, the Korean economic crisis was a result of structural weaknesses in the corporate sector. The Korean *Chaebols* were already on the path to economic disaster, having shown low productivity and profitability years before the actual financial crisis hit the country. With high debt-equity ratios, Korean firms were expected to yield high profitability on their equity. However, the average rate of return on the equity was lower than the prevailing interest rates for loans. On average, the return on capital was lower than its opportunity cost for almost ten years before the crisis. Thus, the capital used in the corporate sector was generally wasted on unprofitable projects. The high debt level and the low profitability of Korean firms were unsustainable.

V. Conclusion

This paper has identified the critical factors underlying the Korean financial crisis. The crisis started with a series of corporate bankruptcies in 1997. The massive large corporate failure ended with massive non-performing loans in the financial institutes severely affecting the soundness of the domestic financial institutions. This substantial corporate/bank insolvency problem soon led to a serious loss of confidence among international investors. A sudden shift in international creditors confidence in Korean firms and financial institutions occurred, prompting these investors to leave the market by cashing their investment and refusing to roll over their short-term lending. As a result, the corporate insolvency problem translated into domestic financial crisis, and ultimately caused the external liquidity crisis.

A comparative analysis of two of the most prominent arguments explaining the causes of the crisis in Korea, the moral hazard and the financial panic theory, reveals that the moral hazard approach interprets the Korean financial crisis. This moral hazard of the corporate sector caused four significant flaws, eventually triggering the financial crisis. First, the debt-equity ratio of the top thirty *Chaebols* was over 500 percent in 1997, extremely high compared to firms in other advanced countries. Such moral hazard-driven high leverage increased companies' financial expenses, eventually lowering the *Chaebols'* profitability. Second, large *Chaebols* undertook a major investment expansion, particularly in the manufacturing sector between 1994 and 1996. However, this moral hazard-driven massive investment boom turned out to be unsustainable when the terms of trade deteriorated by approximately 20 percent in 1996. This huge trade deterioration severely damaged the *Chaebols'* profitability, which was potentially dangerous given the over-leveraged structure of the Korean corporate sectors. Third, *Chaebols* operated in a wide series of businesses. *Chaebols* intended to diversify beyond their optimal limit based on

the government's implicit risk partnership with business groups. This extensive diversification strategy often failed to consider economic efficiency and resulted in excessive, debt-fueled expansion unsustainable in economic downturns, especially financial crisis. Finally, with wages higher than labour productivity and interest rates higher than capital productivity over the past 10 years, companies were unable to accumulate profits. Under the above circumstances, the companies could not accumulate profits. For example, the average rate of return on equity was lower than the prevailing interest rates for loans. Given the over leveraged and over invested structure of the Korean corporate sector, profitability decreased making Korean firms very vulnerable to any shock; these low profits decreased the ability to service the high debt that those companies accumulated.

The effort of the government to reform the *Chaebol* is in process now. The government, however, has not yet achieved enough success to continue the comprehensive *Chaebol* reform program. For example, the top 5 *Chaebols* are lagging far behind in the government's restructuring plan and remained very resistant to government efforts to restructure until recently. Moreover, the government's concentration on the top 5 *Chaebols* in its efforts at corporate restructuring, namely "big deals[30]", sent a wrong signal to the market that only the top 5 would be safe in periods of financial turmoil (Root, 2000). In other words, the government policy created an economy-wide moral hazard by making the power of the top 5 even greater than before (The Business Week, 1998).

The current reform plans in Korea, therefore, ought to focus on cleaning up the remnants of the past moral hazard. In order to achieve this critical task, the government needs to take a

[30] The government called for large *Chaebols* to engage in what is called "big deals", wherein they exchange subsidiaries through mergers and acquisitions (M&A) among them as the focus of the industrial restructuring.

more liberal position to the corporate sector. In other words, the government will have to reduce its role as an economic player by desisting from its past habit of intervening in the corporate sector. If *Chaebols* are not performing well, for example, the government should not quickly takeover the failing company and hand it over to another *Chaebol*. The government should let the market decide whether the firm should go bankrupt. However, the government still needs to maintain its role as a neutral umpire, protecting the market principles and providing a legal infrastructure for economic players. In the mean time, *Chaebols* must try to solve the four given moral hazard drive flaws by focusing on their core businesses that have a chance of becoming internationally competitive, and improving their debt/equity ratios for future growth and prosperity.

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