

# DETERMINANTS OF CORPORATE RESTRUCTURING IN KOREA AFTER THE 1997 ECONOMIC CRISIS: AN EMPIRICAL INVESTIGATION

Chinmay Pattnaik\*

*Yonsei School of Business, Yonsei University*

## ABSTRACT

*This study examines the impact of corporate governance and firm characteristics on corporate restructuring in Korea after the economic crisis. We specifically analyze factors that had a bearing on corporate restructuring following the sudden economic downturn. In particular, we examine the impact of firm characteristics such as leverage levels and prior performance, together with ownership structure like insider block-holding ownership, foreign investor ownership, and institutional investor ownership on the extent of asset sales. The empirical results show that firm characteristics such as high prior performance have a negative impact on asset sales while high leverage has a positive impact. In the ownership structure, insider block holding and foreign investor ownership have negative impacts on asset sales.*

*Key Words: Corporate Restructuring, Asset sales, Korea, Corporate Governance*

## INTRODUCTION

One of the prominent aspects of corporate behavior in Korea in the aftermath of economic crisis was the rise in corporate restructuring activities undertaken by corporations to survive the crisis. The crisis in the financial sector, which led to a severe credit crunch and skyrocketing interest rates, created serious liquidity problems for the already overleveraged firms. On the top of that, a decline in domestic demand led to a decline in firm profitability. Within a few months after the crisis erupted it became evident that firms could not survive without taking immediate measures to restructuring and, consequently, embarked on such program on a massive scale.

While the impact of government-led restructuring policy is widely analyzed in

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\* Address: Yonsei School of Business, Yonsei University, 134 Seodaemoon-Ku, Shinchon Dong Seoul 120-749, KOREA. Email: [chinmay@yonsei.ac.kr](mailto:chinmay@yonsei.ac.kr)

the economic policy literature, most previous research approached the topic from the point of view of the national economy (Ahn et al. 2003, Sohn 2002). These studies however did not closely examine firm-level determinants of corporate restructuring. This study addresses this research gap by examining the firm-level determinants of asset restructuring. In particular, our primary research question is: what factors drove firms to undertake asset sales after the economic crisis?

Existing explanations on the determinants of asset restructuring can be broadly categorized into environmental and agency theory explanations (Bethel & Leibeskind 1993, Johnson 1996). Environmental explanations of asset restructuring posit that the rise in corporate restructuring in the U.S. was due to changes in the regulatory and competitive environment, e.g. government antitrust and tax policies, monitoring and discipline from external capital markets through acquisition threats, and increases in competition leading to rise in corporate restructuring. In such circumstances managerial motivation to sell assets are based on efficiency gains. Managers only retain productive assets from which they believe they can gain competitive advantage and will sell assets that other parties can manage more efficiently (Hite, Owers, and Rogers 1987, Maksimovik and Philips 2002). In contrast, the financing hypothesis of asset sales, which is based on agency theory, argues that managers value firm size and control. Contrary to efficiency gains, managerial motivation in this case is to sell assets in order to survive the credit crunch. Under this theory, managers sell assets to obtain funds when alternative sources of financing are too expensive due to agency cost of debt or information asymmetry, which makes equity sales unattractive (Lang, Poulsen and Stulz 1995).

In this study we extend the agency theory view by examining the determinants of asset restructuring in the Korean business environment after the economic crisis. Agency theory emphasizes the conflict of interest between managers and shareholders. While shareholders' wealth depends solely on the market value of the firm, managers' pay depends more on firm size and bankruptcy risk (Jensen and Meckling 1976). Consequently, managers have no compelling motivation to sell assets unless they face the risk of bankruptcy or are pressured to restructure by shareholders looking to enhance firm value.

In considering the post-crisis economic environment, we emphasize managerial motivation and the pressure exerted by different block-holding shareholders as the main factors behind asset sales in Korea. After the economic crisis, there was massive distress in the financial sector, creating a severe credit crunch and serious liquidity problems for firms trying to raise funds. As a result, asset sales by managers was the most attractive means to obtain critical funding to improve balance sheets and generate short-term cash flow to service debts and avoid defaults (Jensen 1986, 1989) that would have led to managerial job losses.

Further, we argue that assets sale decisions are not guided by managerial

motivation alone. It also depends on the pressure by external block-holding owners. Block holders have major wealth at stake in the firm and possess both the motivation as well as the power to pressure the managers to run the firm efficiently. These block shareholders will pressure management to restructure the firm or sell assets to avoid a decline in firm value or, worse, outright bankruptcy. Our view is consistent with Lang, Poulsen and Stulz (1995), who found that firms selling assets have high leverage and/or poor performance. Bethel and Liebeskind (1993) likewise found a positive relationship between insider ownership, block holder ownership, and institutional ownership on corporate restructuring. We adhere to this line of argument in our paper.

The organization of this paper is as follows: In the next section, we briefly discuss the genesis of corporate sector crisis in Korea and the government's corporate restructuring policies. In the following section, we present theories and hypotheses on the determinants of asset sales. We then turn to a discussion of the data, variables and methodology used in the study to test the hypotheses and, in the final section, discuss our findings and implications.

## **ECONOMIC CRISIS AND KOREAN CORPORATE SECTOR**

The economic crisis that hit Korea at the end 1997 was due to a combination of a weak financial sector, rapidly depleting foreign exchange reserves and high levels of corporate debt. The corporate sector had structural problems prior to the crisis that made it vulnerable to external shocks. At the onset of the economic crisis, the Korean corporate sector was characterized by diversified business portfolios with highly leveraged capital structures, while at the same time suffering from declining profitability. Excessively financed by debt, Korean firms diversified extensively, especially during the 1990s. The government-controlled banks lent money mainly on the basis of collateral rather than earnings measures, cash flow management or the debtor's ability to repay the debt. As a result the average debt to equity ratio of Korean manufacturing firms was more than 300% during the 1990s. Moreover, the ratio of short-term debts to total debts was as high as 60% at the end of 1996. The profitability of Korean firms experienced a declining trend especially from 1995, reaching negative growth in 1997. Further, Korean firms had higher liquidity constraints, as the share of illiquid assets on the balance sheet was much higher (Lee 1998, Sohn 2002). Especially in the case of firms affiliated with the highly diversified, large business groups (known as chaebol) which dominated the Korean corporate landscape, the debt to equity ratio was 600% in 1997 (Chang 2003).

The economic crisis in 1997 clearly revealed the drawbacks of the corporate sector. A number of firms went bankrupt, including 13 of the largest chaebols. The number of formal bankruptcies of incorporated firms went up from 5,157 in 1996

to 8,226 in 1997. The non-performing loans in banks reached 16.9% of total bank loans, or 20.7% of Korea's GDP in 1997 (Sohn 2002). The increasing number of bankruptcies in the corporate sector burdened the financial sector with non-performing loans. Faced with the intertwined crises of the financial and corporate sectors, the Korean government initiated a policy of corporate restructuring by prioritizing financial sector restructuring. The government established transparency measures in financial institutions, insisting forcing institutions to classify their loans and adjust their capital adequacy ratios to the minimum standard criterion of 8% suggested by Bank of International Settlement (BIS). As a result, commercial banks were extremely reluctant to lend to the corporate sector. Because the corporate sector was already heavily dependent on bank loans for survival, this made matters even worse for the cash-strapped firms. Further, the government-led debt work-out program that was run through creditor banks required firms affiliated with big chaebols to reduce their debt to equity ratios to 200% and sell off non-viable affiliates to increase their mid and long-term cash flow. Participation in government-sponsored corporate rehabilitation programs would otherwise be restricted.

In addition, the government strengthened the supervision of banks and financial institutions, while liberalizing the market by both eliminating unnecessary regulations and opening it to foreign investments. Under the new rules, foreign investors were allowed to acquire domestic firms in most industries with few restrictions, and with the exception of a few key sectors. To develop the M&A market, the government also abolished the regulations that had made it difficult for a firm to acquire another firm. With these changes, foreign investors purchased significant shares of Korean firms and, in many cases, involved themselves actively in management to protect their interests. Additionally, institutional investors were allowed to break from past practice and emerge from the shadows at shareholders' meeting to use their voice on important management issues.

To summarize, the post-crisis Korean business environment featured overleveraged and low performing firms facing a severe credit crunch under a relatively new condition of close monitoring by shareholders. In the following section we develop hypotheses centered on the above business environment in Korea.

## **THEORY AND HYPOTHESES**

### ***Agency Theory, Financing Hypothesis and Corporate Restructuring Capital Structure***

Agency theory emphasizes the conflict of interest between managers and shareholders. While shareholders' wealth depends solely on the market value of the firm, managers' pay depends more on firm size and bankruptcy risk (Jensen and

Meckling 1976). Since managers value bankruptcy risks, they are more likely to avoid bankruptcy or default, as these actions would force them to search for new employment with a crippled legacy from the previous firm. Managers can avoid bankruptcy risks by using internal funds, accessing the external capital market or selling their assets. The financing hypothesis of asset sales argues that high leverage/low performance firms will find it difficult to raise funds from external capital markets due to an information asymmetry between firm and market that makes equity sales unattractive (Lang, Poulsen, and Stulz 1995). Jensen (1989) argues that highly leveraged firms are more likely to restructure their operations, as small declines in firm value lead to default. Asset sales and divesting operations provide critical short-term cash flow that managers can use to service debts and avoid default. Based on this argument Lang, Poulsen and Stulz (1995) found that firms with high leverage and low prior performance are more inclined towards asset sales.

Korean firms were highly indebted when the economic crisis hit the country. The average debt-to-equity ratio at 1997 was over 350%, much higher than firms in other countries. The economic crisis left the banking sector technically bankrupt, with a rise in both non-performing loans and corporate bankruptcies. The IMF-led restructuring program raised the interest rates further, making it difficult to borrow from the banks. Moreover, armed with guidance from the government, creditor banks asked the borrowing companies to reduce their debt-to-equity ratio below 200%. Raising equity was not easy due to a serious loss of confidence in the market. At this juncture the firms had little choice but to raise funds by selling assets, using the proceeds to service their debts.

*Hypothesis 1. The leverage of the firm will be positively associated with the firm's asset sales.*

### **Prior Performance**

Together with the high leverage structure, prior performance is an important trigger for asset restructuring, especially divestiture (Brown, James, and Mooradian 1994) and asset sales (Lang, Poulsen, and Stulz 1995). When firms have low performance, asset sales can provide cash flow to strengthen the balance sheet. Brown, James and Mooradian (1994) found that firms that had either defaulted or anticipated default, divest business units to improve overall performance and generate funds. Lang, Poulsen and Stulz (1995) argue that poor performance leads to asset sales as managers cannot raise funds in the external capital market. They found a positive association between poor performance and asset sales. After the economic crisis, generating funds to strengthen the balance sheet was of paramount importance to firms. Those with high prior performance possessed funds to service their debts and survive the economic crisis, whereas for firms with low prior performance it was necessary to sell assets to generate finances to improve their balance sheet.

Therefore, firms with high prior performance will be less inclined to pursue asset sales than firms with low prior performance.

*Hypothesis 2. The prior performance of the firm will be negatively associated with the firm's asset sales*

Although we developed our above hypothesis from a financing perspective, managerial motivation alone cannot explain the phenomenon of asset sales. The pressure by block-holding shareholders will be important in disciplining management to undertake asset sales. Relevant hypotheses have been developed in the following section based on ownership structure.

### ***Agency theory, Block holder Monitoring and Corporate Restructuring Insider Block-holding Ownership***

Based on the dispersed ownership structure, where ownership is spread among a large number of shareholders and control rests with the manager, agency theory argues that large block shareholders can effectively monitor the professional manager and push him to run the firm efficiently. As they have a high ownership stake, large block holders possess the motivation and power to discipline management. Bethel and Liebeskind (1993) found that block holder ownership was a significant determinant of downsizing, reductions in total diversification, and reduction in inward investments. In contrast to the monitoring role of block holders in firms with dispersed ownership structures, recent studies have emphasized the conflict of interest between insider block-holding owners and minority shareholders in firms with concentrated ownership structures (La Porta et al. 1999). In countries with concentrated ownership structures, large insider block-holding owners control a number of firms with cross shareholding between firms under their control and maintain control rights in excess of ownership rights. The primary motive of these insider block-holding owners is to maintain control over the firms rather than pursuing value enhancing strategies (Bebchuk 1999).

Traditionally, these insider block-holding owners have been prevalent in Korea (Chang 2003, Joh 2003). Especially in the case of chaebol-affiliated firms, insider block-holding owners maintained control over a firm through a circular chain of ownership links. Their inclination was more towards maintaining control of the firm than selling assets. The agency costs associated with the insider block-holding owners are well documented in existing research in pursuing unrelated diversification and other value reducing strategies leading to declines in firm value (Baek 2004, Joh 2003). Considering the agency cost associated with the insider block-holding owners, we emphasize that insider block holders will be reluctant to sell assets for fear of losing control over other firms under their control. We argue

that total large insider block-holding owners will have no incentives to sell assets and will use their rights to maintain control over the firm after the economic crisis.

*Hypothesis 3. Insider block holding ownership in the firm will be negatively associated with the firm's asset sales.*

### **Institutional Investor Ownership**

Institutional investors play an effective monitoring role in ensuring that managers operate the firms efficiently. As institutional investors own a large portion of shares in the firm, they have the power and incentive to influence management. Existing research has emphasized the monitoring role of institutional investors because they act as intermediaries for third party investors. These institutional investors manage shares on behalf of other investors and their performance is measured in terms of their own financial successes (Thomsen and Pedersen 2000). As they are accountable to their investors, institutional investors will be more inclined to monitor the managers, pushing them to run the firm efficiently and increase firm value. Recent research suggests that institutional shareholders play an active role in firm strategies in general (Kochhar and David 1996, Tihyani, Johnson, Hoskisson and Hitt 2003) and corporate restructuring in particular (Bethel and Liebeskind 1993).

In the case of Korea, institutional investors played a limited role in controlling managers prior to the economic crisis. The government controlled banks until the economic crisis in 1997. And, although banks held securities, they had little incentive and expertise to undertake monitoring. In addition, rather than fulfilling this monitoring responsibility, non-bank financial institutions were controlled by the business groups and acted as stooges to the existing management. However, the post crisis financial restructuring provided more autonomy to these institutions, while also making them more accountable to their customers. As a result, the character and role of institutional investors changed from mere holders of securities to active participants in corporate governance. Based on this, we hypothesize that firms with higher institutional ownership will force managers to sell assets in order to raise adequate capital to improve the balance sheet.

*Hypothesis 4. Institutional investor ownership in the firm will be positively associated with firm's asset sales.*

### **Foreign Investor Ownership**

Recent studies on the role and motivation of foreign investors emphasize the corporate governance role of foreign investors in emerging economies (Khanna and Palepu 1999, Baek et al. 2004). According to these studies, foreign investors are not

only a source of alternative financing but also play monitoring role like other shareholders in emerging markets. Their role is important, especially when the monitoring skills of external owners are inadequate. Additionally, foreign investors have valuable corporate governance experience in developed markets and can bring their monitoring skills to emerging markets. Khanna and Palepu (1999) asserted that foreign investors tend to invest more in transparent companies, which have fewer internal transactions through internal capital market in emerging markets like India.

After the economic crisis, the investment environment on the Korea stock exchange became more foreigner-friendly, attracting investment from foreign portfolio investors. As of 2001, foreign investors comprised 30% of total market capitalization of Korean listed firms (Shin and Chang 2003). Shin and Chang (2003) also found support for the monitoring role of foreign investors. They saw that a rise in foreign investors led to change of CEOs at Korean firms with low profitability. Based on the above argument, we hypothesize that foreign investors will play a monitoring role in Korean companies and induce asset sales to improve the financials of the firm after the economic crisis.

*Hypothesis 5. Foreign investor ownership in the firm will be positively associated with firm's asset sales*

## **DATA, VARIABLES AND METODOLOGY**

### ***Data***

The data to test above hypotheses were obtained from the TS2000 database compiled by the Korea Listed Companies Association (KLCA hereafter). KLCA was established in 1973. It is the most reliable database available in Korea and several previous studies have used the database (Shin and Park 1999). The database contains financial and ownership information of all the listed firms in the Korea Stock Exchange (KSE). This study examines the impact of corporate ownership and firm characteristics on asset restructuring during the period 1997-2002 after the economic crisis hit Korean financial and corporate sectors. Although Korea officially obtained bail-out loans from the International Monetary Fund (IMF) at the end of 1997, the economic crisis, especially defaults in the corporate sector, started at the beginning of 1997. Companies like Hanbo Steel and Kia Motors were declared bankrupt in early 1997. Considering the intensity of corporate restructuring this year, we decided to focus on asset sales from 1997 till 2002. In order to gauge the impact of the independent variables, our observation of them stretches from 1996 till 2001. All the independent variables have a one-year lag with the dependent variable. Detailed explanations about the variables are presented below.



***Variables - Asset Sales***

An asset sale is measured by the decrease in the ratio of the asset during a particular year compared to the previous year. We used the measure  $\text{Asset sales} = (\text{Total assets (t+1)} - \text{total assets (t)}) / \text{Total assets (t)} < 0$ , where t is year of observation for the independent variable. We included only the firms which have reduced their asset in time t+1 compared to time t. In other words, for restructuring in 1997, we measured the asset sales variable as  $(\text{total asset in 1997} - \text{total asset in 1996}) / \text{total asset in 1996}$ . The independent variables in the regression are measured for the year 1996 as discussed below. We found 1361 firm year observations, which reduced their assets. However, our final sample consists of 686 firm year observation with firms performing asset sales during the period from 1997 till 2002 and without any missing values about explanatory variables.

***Insider Block-holding Ownership (IOWN):***

Corporate ownership in Korean firms is concentrated in the hands of insider block-holding owners, generally with the family owner and affiliates. The TS2000 database provides a detailed account of insider block-holding ownership which consists of ownership rates and three kinds of ownership ratios: the ownership rate of the large shareholder individually, the ownership rate of the family, and the ownership rate of affiliated companies controlled by the family. We added the above three variables to calculate the insider block-holding ownership. Previous studies have used this measure to test the impact of ownership concentration on firm performance (Chang 2003, Joh 2003).

***Institutional Investor Ownership (INSTOWN):***

The ownership rates of institutional investors consist of three kinds of ownership shares: the ownership share of banks, the ownership share of insurance companies, and the ownership share of brokerage houses. We added the above three variables to calculate the institutional investor ownership. Similar measures were used by a number of existing studies for their role in corporate governance (Pound 1992), firm strategy (Thyani, Johnson, Hoskisson and Hitt 2003) and corporate restructuring (Bethel and Liebeskind 1993).

***Foreign Investor Ownership (FOROWN):***

One of the most prominent aspects of corporate ownership in Korea is the rise in ownership through foreign shareholding. In leading companies like Samsung Electronics, Pohang Iron and Steel Company (POSCO) and SK Corporation, foreign ownership has increased to more than 50% of total shareholdings. Percentage of shares owned by foreign investors is available in the above database under the identity of the shareholders and this comprises our final variable, which is

similar to the previous studies (Baek 2004).

***Leverage:***

A highly leveraged capital structure was one of the major determinants that worked as a catalyst during the corporate crisis in Korea. We calculated the leverage as the ratio of total debt by total asset (Total Debt/ Total Assets).

***Prior Performance:***

We calculated prior performance on the basis of being able to provide a firm with cash flow to continue its business despite an economic downturn as Return on Invested Capital (ROIC) – calculated as a sum of net income before tax plus interest payments/Total Assets. Chang (2002) has shown that ROIC is a better performance measure than Return on Assets, especially in the Korean case.

***Control Variables:***

We used three major control variables in the regression analysis. First, we control for the firm size because there is possibility that big firms may be more reluctant to reduce size. Big firms have more organizational slack and smaller firms will be more influenced by the crisis, especially for financial reasons to carry on more restructuring. We calculated *firm size* as the natural log of sales. As we are measuring asset sales, we decided to include sales as a measure of firm size rather than assets to mitigate the correlation affect. Second, liquidity is a major problem for firms after the economic crisis. With the banking sector in crisis, the liquid asset possessed by a firm is expected to provide the firm with a lifeline to survive the crisis. We included *liquidity* calculated as natural log of liquid assets. Finally, considering the dominance of chaebols in the corporate landscape of Korea and separate restructuring regulation for chaebol affiliated firms, we decided to control the chaebol effect by including chaebol dummies in the regression. *Chaebol* is a dummy variable taking the value ‘1’ if the firm belongs to the top 30 business groups in Korea and ‘0’ otherwise. This list of chaebol dummies was created from the list compiled by the Korea Fair Trade Commission (KFTC) for each year. Previous studies have included the chaebol dummy to observe the chaebol effect (Chang 2003, Joh 2003). We also controlled the year effect by including year dummies.

***Methodology***

Based on the above variables, our final model for empirical test is:

$$(Total\ assets\ (t+1) - Total\ assets\ (t)) / Total\ assets\ (t) < 0 = f(L\ S\ H\ O\ W\ N(t), F\ O\ R\ O\ W\ N(t), I\ N\ S\ T\ O\ W\ N(t), L\ e\ v\ e\ r\ a\ g\ e(t), P\ r\ i\ o\ r(t), F\ i\ r\ m\ s\ i\ z\ e(t), L\ i\ q\ u\ i\ d\ i\ t\ y(t), C\ h\ a\ e\ b\ o\ l\ d\ u\ m\ m\ y, y\ e\ a\ r\ d\ u\ m\ m\ y)$$

We tested the above model using an Ordinary Least Square regression method. The descriptive statistics show that some of the correlation among the independent variables is at an acceptable level while the correlation is high between some variables. Therefore, we divided the regression models into three independent models. This process was carried out to observe the individual effect of independent variables separately. In the first model we included only the firm characteristics; leverage and prior performance together with the control variables. In model 2, we only included the ownership structure variables; insider block-holding ownership, institutional ownership, and foreign ownership together with the control variables. In the final model, we included all the independent variables to test the combined effect. The results of each of these models are discussed below.

## RESULTS AND DISCUSSIONS

Table 1 provides mean, standard deviation and correlation of variables.

**Table 1. Descriptive Statistics**

	Mean	SD	1	2	3	4	5	6	7	8
Asset Sales	12.24	12.22	1							
IOWN	31.26	14.44	-0.09*	1						
FOROWN	4.6*	9.2	-0.06*	-0.2	1					
INSTOWN	9.18	10.69	0.01	-0.12***	0.11**	1				
Leverage	66.29	25.8	0.23***	-0.20***	-0.15***	0	1			
Prior Performance	2.75	17.25	-0.14***	0.07*	0.13***	0.06*	-0.31***	1		
Firm Size	19.21	1.46	-0.01	-0.11**	0.34***	0.20***	0.12**	0.21***	1	
Liquidity	9.2	12.78	-0.07*	-0.01	0.03	0.08*	-0.31***	-0.21***	-0.25***	1

\*\*\*P>0.01, \*\*P>0.05, \*P>0.1

On an average, the firms reduced their assets by more than 12% during 1997-2002. The average insider block-holding ownership is more than 31% in the firms under observation, followed by institutional investors with 9% and foreign investors with around 5%. The high ownership share of insider-block holding owners is due to the fact that they still control the firm by using both direct and indirect ownership in the firm. The direct ownership comes via the ownership of the ultimate owner and his/her family members. The insider block-holding owners also use various indirect mechanisms to control a group of firms. These indirect ownership mechanisms are largely maintained through inter-corporate shareholding under the control of an ultimate owner. These types of ownership structures are more prevalent in chaebol-affiliated firms. The owner of the chaebol-affiliated firms

controls a group of firms. Through the control of a group of firms, a particular firm affiliated with a chaebol could borrow funds from the bank by obtaining collateral from other firms in the same group. Moreover, member firms of a particular group cross-subsidized each other by creating an internal capital market in Korea (Chang 2000). The creation of internal capital markets and obtaining bank credit made it desirable for business group owners to maintain control over a large group of firms and they became reluctant to loose control.

In terms of correlation between some of the independent variables, insider-block holding owners and foreign investors, there is a negative correlation with leverage, and positive correlation with performance. The government directive for all the listed firms to reduce the debt-to-equity level to 200% may have resulted in insider block-holding owners reducing the debt levels after the crisis and focusing on performance. On the other hand, foreign investors have invested in the firms with low leverage and high performance.

Table 2 shows the regression results.

**Table 2. Regression Results**

Variables		Model 1	Model 2	Model 3
Ownership	IOWN		-0.08**	-0.04*
	FOROWN		-0.08*	-0.03
	INSTOWN		0.009	0.02
Firm Characteristics	Leverage	0.10***		0.10**
	Prior Performance	-0.05*		-0.04*
Control	Firm Size	-0.24	-0.19	-0.25
	Liquidity	-0.005	-0.08*	-0.01
Dummy	Chaebol Dummy	-1.17	-1.89	-1.25
	Year Dummy	Included	Included	Included
R square		0.09	0.04	0.09
Adj. R square		0.07	0.03	0.07
F Value		6.70***	2.98***	5.36**
N		685	685	685

\*\*\*P>0.01, \*\*P>0.05, \*P>0.1

Model 1 shows the individual impact of firm-specific characteristics on asset restructuring. In accordance with hypotheses 1 and 2, we find that an increase in leverage leads to more asset sales, while higher prior performance leads to less asset sales. The above findings support the financing hypothesis of asset sales that Korean firms with high leverage/low performance sold assets to survive the economic crisis, especially due to the liquidity crisis in the financial sector. This is

similar to findings in the US (Lang, Poulsen, and Stulz 1995). These results support the agency theory view of financing, under which managers value firm size and control and are compelled to sell assets when alternative sources of financing are difficult to obtain. Faced with the liquidity crunch, Korean managers sold assets to avoid bankruptcy.

Model 2 reports the impact of ownership variables on asset sales. According to hypothesis 3, we find that an increase in insider block-holding ownership leads to lower asset restructuring. Insider block-holding owners are characterized as the source of agency problems in previous research on the Korean context. They control firms with various mechanisms, especially with a circular chain of ownership among group companies. It seems that even after the economic crisis, insider block holders still try to retain control over the firms without divesting assets or focusing on the core activities of the firm. Contrary to hypothesis 4, we find that a rise in foreign ownership leads to lower asset sales. This may be due to the fact that foreign investors increase their ownership in firms that have already restructured their assets without the need for further asset sales. The significant correlation between foreign ownership, higher sales and prior performance indicates that foreign investors only invest in firms with good growth and higher profitability. Since these firms have good performance, they will be reluctant to sell assets. Few empirical studies are available on the role of foreign investors in emerging markets. While one view argues that foreign investors play a monitoring role in emerging markets, the other view is that foreign investors are only concerned about economic benefits and therefore choose firms with good prior performance. Our study hypothesized on the monitoring role of foreign investors but found support for the view that foreigners do indeed pick well-performing firms. However, we do not find any significant impact of institutional ownership on asset sales. Although the character of institutional owners has changed since the economic crisis, their monitoring role was not found to be significant, especially in the case of asset sales after the economic crisis.

Model 3 shows the combined effect of both firm characteristics and corporate governance on asset restructuring. We find that the impact of foreign ownership on asset sales becomes insignificant. Also, there is a slight decline in the significance of insider block-holding owners on asset sales. However, the other variables with firm characteristics remain significant. This is due to the fact that the management of highly leveraged firms have opted to sell assets to improve their balance sheet and avoid bankruptcy. In addition, the management of firms with high prior performance is less inclined to pursue asset sales. However, insider block-holding owners are found to be reluctant to sell assets. One interpretation for this could be that insider block-holding owners also appoint their family members as managers acting in the interest of these insider owners. Despite high leverage and low

performance, these managers are naturally less reluctant to sell assets directed by the large insider shareholders as compared to the professional managers. Chaebol-affiliated firms were the worst hit after the economic crisis. 13 out of the top 30 chaebols went bankrupt. We expected chaebol-affiliated companies will be more inclined to sell assets compared to independent firms. However, our chaebol dummy was insignificant in all the three models. The propensity of the crisis was so large that all firms faced similar crises after the economic downturn.

This study analyzed the impact of firm characteristics and corporate governance on asset restructuring. We found support for leverage and prior performance on asset restructuring. High leverage/poor performance led to a rise in asset sales consistent with the financing hypothesis. We also found support for insider block-holding owners and foreign investor ownership on asset sales. These results indicate that insider block-holding owners resist radical restructuring despite the fact that the firm faces a deep financial crisis. These owners are more interested in maintaining control over the firm than inducing managers to enhance efficiency. The negative impact of foreign investors on asset sales is due to the fact that foreign investors invest in profitable companies with high growth prospects. Future research should explore the impact of other variables on asset restructuring. Other restructuring measures such as organizational and financial restructuring will shed new lights on determinants of corporate restructuring after the economic crisis.

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