

# Thailand Corporate Restructuring and Pre- and Post-Crisis Ownership and Control\*

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## *I. Introduction*

Thailand's 1997 systemic crisis caused the massive restructuring of its corporate sector. Accompanied with restructuring outcome, one witnesses change in the structure and the extent of ownership and perhaps control aspect of the publicly-listed corporation. On the structural side, restructuring may lead to domestic and foreign creditors, new strategic investors or group emerging as partial or major owners. On the other hand, quite a few previous family owners-managers, which are typical pattern of ownership in Thailand, have succeeded in maintaining their previous role. It is interesting to find out that what are the typical and variation of ownership structure and control of publicly-listed corporation before the crisis? Compared with earlier studies (for example, Claessens et al. 2000; La Porta et al.

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1999; Khantavit et al. 2003),<sup>1</sup> which focus more on the distinction in the nature of control between control and cash flow rights through direct and indirect control, pyramiding and cross-holding structures etc., our study will highlight questions that are remained unanswered, namely that compared with other factors, what are the role and relationship, pattern of the nature of financial restructuring and the change in ownership structure and control after the crisis. Our initial hypothesis is that we should find a difference in the change in the ownership and control structure of the Rehabilitation-Board companies (Rehabco) that listed in the Stock Exchange of Thailand (SET) as well as the difference in the extent of financial distress, nature of restructuring, and other factors. An explanation will be attempted.

Although there is a bulk of literature that examines the structure of corporate ownership and control in both of the worldwide and East Asian views, most of them do not relate the change in ownership and the control of the firm with the financial/debt restructuring process. The organization of the study is as follows: Section II presents the conceptual framework and working hypothesis. Section III provides some notes on ownership and control of Thai publicly-listed corporation. Section IV describes data and methodology used in the study. Section V shows the empirical results. Section VI provides concluding remark.

## ***II. Conceptual Framework and Working Hypothesis***

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<sup>1</sup> However, Khantavit et al. (2003) observes the small change in ownership and control of Thai family firms after the 1997 crisis. This may be caused by the period of study that uses 2000 as the post-crisis year, because a lot of insolvent firms restructured their debt/business in 1999-2000 so its effect on ownership and control change was not yet occurred in 2000.

Our study attempts to find out whether there is the change in ownership and control of the Thai insolvent firm before and after the 1997 crisis, and what determines the change. There are two groups of literature that related to our research questions. The first group studies the pattern of ownership and control in the governance context (Burkat et al. 2003; Claessens et al. 2000; La Porta et al. 1999; Khantavit et al. 2003; Suehiro and Wailerdsak 2004)<sup>2</sup>. The second group studies the relationship between debt restructuring process and change in ownership and control (Gilson 1989; Gilson 1990; Gilson et al. 1990; Gilson 1997; Hotchkiss 1995; Vongvipanond and Wichitaksorn 2005a).

From the reviewed literature, when a firm defaults on its debt either in the normal business operation or in the crisis time, it has to restructure or renegotiate its debt contract with the creditors. In US, there are two choices for the insolvent firm to restructure its debt. One is the private workout. The other is Chapter 11 bankruptcy reorganization. Cost and incentive sharing are two important determinants of these two choices.<sup>3</sup> In Chapter 11, it is usual to see the exchange of securities—as well as debt—between the classes of claimholders in the reorganization plan (Gilson et al. 1990). It means that the role of claimholders especially the financial creditors in the restructuring process becomes greater. Creditor banks take the control of the debtor firm through stock ownership and board representation, and restrictive covenants. The standard theory suggests that if a firm faces the deteriorating performance especially

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<sup>2</sup> Two of them compare the ownership and control pattern of Thai family firm between pre- and post-crisis period (Khantavit et al. 2003; Suehiro and Wailerdsak 2004).

<sup>3</sup> However, there are also other factors that are important to the successful restructuring through each choice such as level of debt, number of creditors, nature of creditors, the insolvent firm's capital structure, and transaction costs. For more details, please see Gilson et al. (1990) and Gilson (1997).

in the insolvency status its management has to be removed. Around 50 per cent of the insolvent firm's management—including Chief Executive Office and board directors—has been replaced during the restructuring process through either private workout or Chapter 11, while creditor banks are responsible for 20 per cent of management change (Gilson 1989; Gilson 1990). Although some literature indicates that retaining pre-bankruptcy management is associated with the worse post-bankruptcy performance, its direction of causality is still arguable because it is unclear whether the change in management would lead to better post-bankruptcy performance, especially when the insolvent firm restructures its debt through Chapter 11 that has been more prodebtor (Hotchkiss 1995).<sup>4</sup> With these findings in mind, it is worth to consider whether the ownership and control structure affects the outcome of post-restructuring change in ownership and control.

Vast literature indicates that in the US corporate governance structure, the ownership and control are separated while there is no separation between ownership and control in the East Asian countries—including Thailand (Claessens et al. 2000; La Porta et al. 1999; Khantavit et al. 2003; Suehiro and Wailerdasak 2004). However, family firm—as a type of firms that ownership and control are not separated—is not an uncommon phenomenon since they exist in many parts of the world (Burkat et al. 2003). There are three main reasons for a family to preserve the firm's control including amenity potential, reputational benefit, and expropriation benefit. Though we cannot clearly indicate that which benefits are dominant in Thai family firm, all these reasons can also explain the non-separation between ownership and control of

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<sup>4</sup> However, Vongvivanond and Wichitaksorn (2005a) finds in Thai context that debtor-in-possession is significantly associated with better post-bankruptcy performance.

Thai corporate sector. It seems in the US business culture that separation between ownership and control might be an important determinant of the post-restructuring management turnover. However, it is still unclear for the case of no separation between ownership and control like in Thailand where there is small ownership and control change after the 1997 crisis. Certainly, it does not mean that no separation between ownership and control change might lead to small ownership and control change. Especially, it is still arguable that more ownership and control might be observed in the insolvent firm than in the solvent firm or the corporate sector as a whole. Accordingly, this study tries to find out the explanation for these puzzles.

Apart from an examination of ownership change and concomitant change in the nature of control, we want to investigate from a single firm or group of companies or on conglomerate basis to sector on the SET. The question is whether there is difference in the pattern of ownership change, for instance, among firms with similar financial distress. When insolvency primarily arises from excessive debt to asset position, apart from other non-financial corporate restructuring generously treated debt reduction or debt forgiving, debt-to-equity swap to restore equity position should naturally be called. However, we still need to probe behind reasons or factors why some firms are more favorably treated in debt forgiving than another's etc. Explanations have to be given also to a) cases where previous ownership family entirely lost the firm, b) partial though substantial change of ownership status but original owners, at the approval of creditors, were still holding important position. Conceptually, we expect the models to be capable of explaining ownership change

and its relationship with the firms' financial health, nature of financial restructuring to work in the following manners.<sup>5</sup>

1) The resolution resistance to loss of ownership (or significant change in a particular firm) of a typical Thai family owner would be a function of the intensity of preference to hold its on steadfastly. That preference would in turn be a function of the significance of that firm in the wealth or portfolio of the family owner. Age, size, expected future or cash flow, and the core competency of the firms would all go to determine positively the degree of resolution determination to keep the firms. Next come the capability of the owner to succeed in maintaining ownership. We would expect family owners who command idle or reserve or possess unobligated wealth to be able, other things being equal, to increase firm capital, to buy debt in secondary debt market at heavy discount and secure reduction in financial distress. We would also expect family owner of conglomerate (vis a vis a new single company firm) to keep core valuable companies, if necessary, by selling other relating companies. Due to this interrelatedness, ownership maintenance in one company may have been made possible be loss of ownership elsewhere when family owner owns a group of

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<sup>5</sup> Actually, in this study we still recognize the role of foreign debt as follows: how does the effect of the nature of loan affect ownership change via the character of debt restructuring? Other things being equal, we would expect family owner firms to be more favorably treated in debt workout and experienced relatively less changes in ownership if foreign creditors command a larger share of family firm's debt. Foreign creditors, in comparing with domestic banks, are expected to grant more debt forgiving. With the limited data availability, we drop this variable from the analysis, however, dropping this variable will not deteriorate our result since the foreign debt already affects the outcome through the debt reduction.

companies or conglomerate. Consolidated restructuring will give a more comprehensive picture.

2) How is the debt is being restructuring is going to affect equity position and consequently ownership change. We expect also large debt reduction than debt forgiving and conversion to equity in firm with related poor future cash flow and one should witness loss in ownership. In other words, owners with poor future cash flow in related to debt service to and little expected or require to lose all or significant ownership. Other things being equal, we expect negative relationship between size of debt reduction through haircut and increase in equity from financial restructuring. That is, the more the debt is reduced, the higher is equity increase. Higher debt reduction will be accompanied with higher change or more loss of ownership.

3) Other thing being equal, we would expect cooperation, good, cordial relationship (vis a vis hostile relationship) between family owned debtor firms and creditors to give rise to positive debt workout, which are favorable to equity of firms and work to prevent the ownership loss.

4) On the contrary, hostility between debtor and creditors will probably entail unfavorable debt reduction to debtors and hence a likely ownership loss. On the other hand, debtors can win in hostile restructuring through manipulation and trick and secure its ownership status.

5) Original owner's direct shareholding in the pre-crisis year may have some effect to the change in ownership and control. Since the original owner who held the high proportion of the company's share, especially the one who has control power, may not want to lose the ownership and control status in the company.

6) The capital structure of the company in most East Asian countries usually has high proportion of debt to equity. Since the capital market development persuades the company to rationally use external finance rather than internal finance. High leverage level, indicated by high debt-to-equity ratio, is another factor that affects the change in ownership and control.

7) In the companies where the original owners lost their entire control, we also expect the change in top management such as Chairman, Chief Executive Officer (CEO), and Managing Director or President.

8) From the western conventional wisdom, the management change is an outcome of the poor performance. Applying to the case of Thailand, in this study the original owner's poor control performance also led to the change in ownership and control.

9) Restructuring through court (the Central Bankruptcy Court: CBC) is another determinant of ownership change. We expect that the highly distressed firm may need the CBC as the important mechanism to restructure its debt. Highly distressed firm needs complicated restructuring methods especially the debt reduction. Since the debt reduction may lead to more loss of ownership and control, we anticipate that the court-based restructuring may also lead to more loss of ownership and control.

10) Besides of the above hypotheses, we will also control the nature of industry that is classified as labour intensive versus capital intensive.

### ***III. Some Notes on Ownership and Control of Thai publicly-listed Corporation***



Legally in Thailand public companies are subject to Public Company Act of 1992 whereas private companies are under civil and commercial code. The term public companies may misleading by convey wider share participation from large population of shareholders. This however may not necessarily be the case. There is no prohibition in law as to maximum number of shareholders in private companies and they can outnumber those of public companies in theory, though not in fact. The major differences in law regarding public and private companies stem more from differences in greater legal protection given to the public for public companies. Thai public companies can legally be formed as juristic entity with only at least 15 shareholders who are usually the founders. Public companies' objectives are defined not in terms of numbers of shareholders but are established for the purpose of selling share to public. The public here can be defined as anybody, which are not the founders. Because of Thai securities and securities market law, the initial public offering (IPO) by the public companies was done sometime after the public companies was legally founded to enable either new capital increase or the selling of previously-issued share by the founders to the public. The Securities and Exchange Commission is handling and approving this aspect of primary market. Once the primary market of IPO process is completed, the public companies may opt to (which they already do get listed) apply for listing the companies in SET. This is the secondary market process. The SET admission criteria will stipulate certain minimum number of capital, market capitalization, past financial (profit) performance as well as small shareholders requirement. As for shareholding structure, SET regulation required publicly traded companies only at least 150 small shareholders--each holding not more than 5 per cent of total and holding at least 25 per cent of the total share.

Examination of distribution and concentration of publicly traded corporation on SET confirmed concentrated inside individual family owner-manager, which control at least a quarter of share. No separation of ownership and control is a typical profile, unlike those being found in the US studies (e.g. Berle and Means 1932; La Porta et al. 1999). Actual ownership concealed through nominees of various forms is definitely larger than those shown by the SET statistics. Loss of ownership through open hostile take over was a rare phenomenon. For larger institutions such as large banks, it is believed that inside original owners now altogether with alliances hold less proportion of share than in the past. The size and proportion of freefloat is increasing and larger. Anyone with capital wants to take over Thai large banks through tender offer is theoretically possible as long as one is prepared to pay some higher price—e.g. 50 per cent increase—for the share.

The fact that we found change in ownership—and management—in Thailand to be less substantial and widespread when firms faced financial distress than those found in the US (Gilson 1990) explain the differences in corporate structure as well as culture in the two countries. It goes to show that in the Thai stage of capitalism development, identity of founders as owners still matter especially for firms with long history, large stakes or of conglomerate nature.

#### ***IV. Data and Methodology***

##### ***IV.A Data and Sampling***

Since SET has established the Rehabilitation Board (Rehabco) in 1998, there are 102 distressed firms, amounting to 25 per cent of all listed-companies as of

August 2005, which entered the Rehabco.<sup>6</sup> In Rehabco, there is the mix of firms that use court and out-of-court in their debt restructuring. However, there are also the other distressed firms that did not enter Rehabco. From these 102 firms as the population of our study, we exclude the firms that 1) have incomplete data, 2) are State-Owned Enterprises, and 3) entered the Rehabco in 2005<sup>7</sup>, but include the other four insolvent firms that listed in SET but did not enter to the Rehabco.<sup>8</sup> Then, we get 69 firms as our sample for this study.<sup>9</sup>

The SET's databases including SETSMART and ISIM provide us the essential data for the analysis. From these sources, we can obtain the shareholding, year of establishment, number of employees, and any financial data. Department of Business Development under the Ministry of Commerce is another source of data for the non-listed companies. After examining the shareholding data of our sample, we find in many firms that the controlling shareholder is likely to have indirect control of the firm via his/her non-listed holding companies.<sup>10</sup>

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<sup>6</sup> SET established the Rehabco with the intention to provide a break for the insolvent firm that needs the debt and/or business restructuring; otherwise it has to be delisted. The basic criterion of the Rehabco is the negative net worth. Exit from the Rehabco requires positive net worth or net profit for three consecutive quarters. SET expects to dissolve the Rehabco in 2007.

<sup>7</sup> We expect no change in ownership and control for the companies that entered the Rehabco in 2005, because they are in the early stage of debt and/or business restructuring.

<sup>8</sup> They are major firms that should not be ignored; Italian-Thai Development, TPI Polene, Jasmine International, and Srithai Superware.

<sup>9</sup> The list of sample firms appears in the Appendix A

<sup>10</sup> We define indirect control as the shareholding through relatives, nominees, other strategic partners, and the owner's holding company.

Since our main focus of the analysis is the change in ownership and control between pre- and post-crisis time. In data collection, we choose 1996 as the pre-crisis year and after 1997 as the post-crisis years. However, for the shareholding data we use August 2005 as the post-crisis time. In many cases especially of the delisted companies we cannot obtain the August 2005 data because after delisting, SET does not collect their data anymore. So we use the shareholding data before delisted as the most update or post-crisis time.

#### *IV.B Definition of Ownership and Control*

Much literature confirms that there is no separation between ownership and control in most of Thai firms (Claessens et al. 2000; Khantavit et al. 2003; Suehiro and Wailerdsak 2004). Moreover, they are family firm and controlled by a single shareholder. In this study, we attempt to examine the change and the determinants of change of share ownership and change in control of the controlling shareholder in the insolvent firms, which are failed by the systemic crisis in 1997.

In this study, ownership means share ownership while the controlling shareholder means a major shareholder or group of major shareholder who also hold the management position(s) or takes the control of the firm. We first start by considering the controlling shareholder's share ownership of a firm. Share ownership is measured as the sum of direct shareholding of controlling shareholder and indirect shareholding—of controlling shareholder—through affiliated firms or related parties in the pyramidal ownership structure. Although it is usual to find the pyramidal structure in many SET-listed firms, looking at information from one or two classes of the voting rights of the controlling shareholder is sufficient for this study.

For the definition of control, the control means the management control. Our definition of control is based on the control rights or siphon rights. In examining the control of a firm, we will find the major shareholder(s) who also hold the incumbent management position(s) including Chairman, Chief Executive Officer (CEO), and President/Managing Director.

For publicly listed companies, it is understood among Thai business community on the basis Thai public company law and the Securities Exchange Commission (SEC) regulatory framework toward corporate acquisition that a first minimum threshold for share ownership to have important implication for important decision control of a public company is 25 per cent. This follows from the fact that major decisions such as changes in capital (increase or decrease) or removal of board members require at least 75 per cent of command of number of shares present at the shareholders' meeting. Anyone owning 25 per cent of share in a publicly listed company can therefore block any major decisions being proposed or having veto right. The significance of 25 per cent holding of share by a single entity in terms of control can be seen from the fact that SEC law related to corporate takeover has stipulated that an entity having reached 25 per cent of share must offer to buy the rest of the share to the public by tender offer process. Beyond this 25 per cent threshold, a simple majority (over 50 per cent) and an absolute control necessitating 75 per cent ownership would represent a hierarchy of control.

Legally and de facto, the relationship or the extent or percentage of share ownership and ability to control the company would depend both on the nature of control and dispersion or distribution of the rest of shareholding. Our concept of control does not focus on day-to-day operation control but power of inside family

shareholders and its related alliance to control major decisions that could affect direction of the company either serving as the Chief Executive Officer/Chairman or sitting on the board of directors. The actual percentage of ownership being required to realize the above objectives will vary from company to company and will be different from those percentages of ownership required to forestall or prevent actual or potential takeover threat. The latter would require a minimum of over 50 per cent or simple majority to obstruct any hostile takeover.

#### *IV.C Models for Estimation*

Main objective of the estimation is to find out that what determines the change in ownership and control—after the crisis—of the Thai insolvent firms. Before we continue to consider the determinants of the ownership and control change, we have to understand the ownership and control change in the context of this study. Though there is no separation between ownership and control in Thai corporate governance structure, in the analysis we would like to consider the determinants of ownership and control change separately.

The ownership change means the change in share ownership of the firm's controlling shareholder between the pre- and post-crisis time that might be occurred and affected by the process of debt restructuring. If the controlling shareholder holds less share ownership, it means that he/she loses the ownership of the firm.

In considering the control change, we examine the change in the three incumbent management positions: Chairman, CEO, and President/Managing Director. Since the authoritative power of each position may differ across the firms, we have no clear-cut rule for the management change. We will consider the removal of—one or

all of—these three positions as the control change if the change affects the firm's policy or reflects the change in the authoritative power.

As for the determinants of ownership and control change, we hypothesize and classify that there are four groups of determinants including the firm's character, the firm's financial performance and distress, the nature of the restructuring, and the firm's shareholding.

In the first group, we have age, size, nature of industry, and firm structure as the firm's characters. We expect that the owner of the long-established firm is less likely to lose his/her control via the change in share ownership. For the size of company, we hypothesize that the loss of share ownership in the bigger firm is considered unfavorable to the owners than that of the smaller company. Since the capital-intensive firm might perform better than the labour-intensive in the pre-crisis period, we expect that the controlling shareholders of the capital-intensive firm may lose his/her share ownership less than that of the labour-intensive firm. The conglomerate versus non-conglomerate firm structure is another determinant of the change in ownership of the insolvent firm. We hypothesize that the conglomerate-type firm has more wealth and subsidiaries than the stand alone-type firm. So the controlling shareholder of the conglomerate may want to keep his/her share ownership.

For the second group, these variables are probably the most important determinants of the change since we expect that the pre-crisis financial performance and the financial distress at the time entering the restructuring process are crucial and have huge impact that determine the loss of the pre-crisis controlling shareholder. The variables in this group include pre-crisis leverage level, pre-crisis ownership

performance, pre-crisis reserve, and degree of insolvency at the time of entering the restructuring process. Since the pre-crisis capital structure of a firm has been always raised as a main cause of the crisis, we hypothesize that the high-leverage capital structure of a firm may cause its share ownership loss. Similar to the leverage level, the pre-crisis ownership performance is another signal that can indicate the vulnerability of the control or management position. In the Thai context that the founder and the owner are same person, the founding owner does not want to lose his/her share ownership and control of the firm. Moreover, the controlling shareholder of Thai firm is inside-concentrated owner that differs from the dispersed shareholders of US firm. On the other hand, if we bring in the business culture into account, to change the owner-manager is more costly than in US that ownership and control is separated. In the event of crisis, the controlling shareholder try to rescue the firm as much as possible and also want to see the continuity of wealth and growth of the firm. In general, poor corporate performance—especially of controller—leads to the change in corporate control or management. In the US business culture, poor control or management performance is the major cause to change the controller or manager (O’Sullivan 2000). This means that in Thai business culture that poor controlling shareholder’s performance also leads to the loss of his/her ownership and control. Pre-crisis reserve can be viewed as the target and the safeguard of the corporate control.<sup>11</sup> In this study, we emphasize its safeguard role. Although in the pre-crisis years Thai corporate sector had high payout ratio (Siamwalla and Wichitaksorn 2004) that implies the low level of the firm’s reserve, yet the pre-crisis reserve still can play the role as the cushion in the event of crisis. In the case of positive equity, it helped the

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<sup>11</sup> We apply the concept of cash and corporate control of Faleye (2004) that viewed cash as both target and safeguard of corporate takeover.



firm to absorb the loss occurred in the crisis. In the other way, the controlling shareholder could use the reserve to repay the firm's debt to the creditors during the restructuring negotiation. This study hypothesizes that the higher the level of pre-crisis reserve of the firm, the lower probability the controlling shareholder will lose his/her share ownership—or control. Insolvency status or degree of insolvency at the time of entering the debt restructuring process is another variable that can determine the change in share ownership—or control—of the firm's controlling shareholder. We expect that the controlling shareholder of the highly-distressed firm is to face the higher risk to lose the share ownership.

The variable in the third group of nature of restructuring is as important as in the second group because it is central to the main theme of this study. We expect that the nature of restructuring is the crucial mechanism of a firm to restructure its debt. Actually, in many cases the pre-crisis controlling shareholder lost his/her share ownership from the debt-to-equity swap that we regard it as the semi-haircut or debt reduction method. In addition to debt-to-equity swap, pure haircut, debt rescheduling, and asset transfer are the other methods that have often been used in the restructuring process. All of these four methods result in the debt reduction that the restructuring firm gets. In the highly-distressed firm, the creditors may give the higher level of debt reduction so as to keep the firm going while they receive the firm's share in exchange. We hypothesize that the more the level of debt reduction the firm gets, the higher the chance of loss of share ownership of the pre-crisis controlling shareholder.

Restructuring through CBC is another determinant in this group. Since most of the firms that restructure their debt through CBC are highly distressed, we expect that they may need the complicated restructuring methods, which include the debt reduction. Coincided with the debt reduction hypothesis, the controlling shareholder

of the insolvent firm may lose his/her ownership and control during the court-based restructuring process.

In the final of group of determinant, we observe and conceptualize that the pre-crisis shareholding in the actual of the name founder or the controlling shareholder, herein and after called “direct shareholding of controlling shareholder—or owner—only”, may indicate the incentive for him/her to continue the control of the firm. Direct shareholding of owner only in this context means the proportion of his/her shares to total share in his/her own name excluding the shareholding via the relatives, the holding companies, the nominees, and the strategic partners. We hypothesize that the higher the proportion of pre-crisis direct shareholding of the controlling shareholder owns, the less the share ownership of the controlling shareholder is likely to lose.

In sum, we expect the negative relationship from age, size, nature of industry, firm structure, pre-crisis ownership performance, pre-crisis reserve, and pre-crisis direct shareholding. While for the other variables including pre-crisis leverage level, degree of insolvency, debt reduction, and restructuring through court, we expect the positive relationship between them and ownership and control change.

From the above arguments, we can rewrite the models of determinants of ownership and control change in the functional manner as:

Ownership change =  $f(\text{Age, Size, Nature of industry, Firm structure, Pre-crisis leverage level, Pre-crisis ownership performance, Pre-crisis reserve, Degree of insolvency, Debt reduction, Restructuring through court, Pre-crisis direct shareholding})$ .

Control change =  $f(\text{Age, Size, Nature of industry, Firm structure, Pre-crisis leverage level, Pre-crisis ownership performance, Pre-crisis reserve, Degree of insolvency, Debt reduction, Restructuring through court, Pre-crisis direct shareholding})$ .

Since the Thai governance structure that the ownership and control are not separated, in the analysis we also assume implicitly that ownership change is consistent or complementary with the control change. It means that the change in ownership is coincided with the change in control.

For the dependent variable, we examine the percentage change in share ownership of the pre-crisis controlling shareholder in the two discrete points of time, 1996 and August 2005.<sup>12</sup> In calculating the change, we choose the 1996 as the base year and examine the change that occurs in the post-crisis time. For example, the pre-crisis controlling shareholder held the 80-percentage point of share ownership in 1996, and after the crisis he/she held the 20-percentage point of share ownership. It means that the controlling shareholder lost 75-percentage change (-60 percentage point) in share ownership.

In order to prevent the non-linearity problem of the model, we classify the ownership change into four categories by the level of percentage change; less than or equal to 25 per cent, more than 25 per cent but less than or equal to 50 per cent, more than 50 percent but less than or equal to 75 per cent, and more than 75 per cent. Thus, in estimating the model of ownership change, the Ordered Probit is used as the

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<sup>12</sup> For the delisted companies that we cannot obtain the August 2005 data, we use the data before delisted as the post-crisis time.

method to analyze the across-the-firm data. All of econometric problems are checked so as to obtain the most robust result.<sup>13</sup>

In the model of control change, the dependent variable of control change is binary variable. If the change in management occurs, we take the value of 1, and 0 otherwise. In the estimation, we use the Logit as the analytical tool.

For the independent variables, we use the number of years from the establishment until 1996 as the measurement of age.<sup>14</sup> In case of size, we measure it by using total assets in 1996. For the nature of industry, we use the total assets per employee as the proxy since we assume that an employee in the capital-intensive firm carries the higher amount of asset than that of the labour-intensive firm. Due to the incompleteness of employee data in 1996, we use both of total assets and number of employee in 1994 for the calculation of nature of industry that we expect no major difference between these two years. For firm structure, we examine the vertical structure of the firm's business as the firm structure. If its structure covers the other—different—business, we consider it as the conglomerate and its value is 1, and 0 otherwise.

In the group of firm's financial performance and distress, we use the debt-to-equity ratio, the gross returns-to-equity,<sup>15</sup> and the retained earnings-to-equity in 1996 to measure the pre-crisis leverage level, ownership performance, and reserve,

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<sup>13</sup> The problems include multicollinearity, heteroscedasticity, and specification errors. We ignore the problem of autocorrelation since our estimated samples are cross-sectional.

<sup>14</sup> Please see the descriptive statistics and the measurement of independent variables in Table 5.

<sup>15</sup> In this study, gross returns are earnings before interest, tax, depreciation, and amortization (EBITDA).

respectively. While for the degree of insolvency, we use the debt-to-asset ratio at the time of entering to the restructuring process as its measurement.<sup>16</sup>

For the other two groups of determinants, we use the cumulative profits from debt restructuring in the restructuring years—most of them are 1998-2005—divided by the debt at the time of entering the restructuring process to measure the level of debt reduction. For the restructuring through court, if the firm restructure its debt through CBC we take the value of 1, and 0 otherwise. Finally, the controlling shareholder's direct-holding shares divided by total shares in 1996 is used as the pre-crisis direct shareholding of controlling shareholder only.

## ***V. Empirical Finding***

### *V.A Overview on Ownership and Control of the Sample Firms*

In the analysis, we find the interesting feature of the delisted companies that their share ownership—after the crisis—has been rarely changed (Table 1). Actually, it is conceivable that the share ownership of the highly-distressed companies like the delisted is likely to be changed. However, we will explore the further explanation on this matter below. So in our analysis, we also separate out the delisted companies from the overall sample in order to assess some interesting feature of them and to make our analysis more rigorous.

<Table 1>

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<sup>16</sup> In the group of Rehabco companies, we use the date of entering the Rehabco as the time of entering the restructuring process. For the other four companies that never enter the Rehabco, we use the time of bankruptcy-reorganization filing acceptance by the Central Bankruptcy Court as the date of entering the restructuring process.

From the overall 69 sample firms, we find that in the pre-crisis era there was no separation between ownership and control in most of them (Table 2). This picture is also not different when we separate out the delisted companies from the non-delisted ones. Although the high-stake owners can keep the control within them, it is possible for them to hire the outsider or the professional manager to run the day-to-day business operation. However, our finding reveals that the owners are likely to keep the management position for their insider such as his/her own or relatives. For the change in share ownership of the pre-crisis owner, we find from overall sample that on average he/she loses the share ownership around 40-percentage point (or around 60-percentage change).<sup>17</sup> Our result seems to conflict with that of Khantavit et al. (2003) since they observe the small change in ownership and control of Thai family firms. This may be caused by two factors. One is the time period they used as the post-crisis year (2000). A lot of insolvent firms restructured their debt/business in 1999-2000 so its effect on ownership and control change was not yet occurred in 2000. Another is the sample in their study. They look at the overall family firms and do not separate out the insolvent firm. It might be possible that the controlling shareholder of the solvent firm lost its share ownership less than the insolvent one.

<Table 2>

The results from Table 2 also provide some interesting features. Shareholding of financial institution—as a creditor—increased from around 7 to 15-percentage point (or more than 100-percentage change) after the crisis. This finding is consistent with that of Gilson (1990), which indicates that on average banks receive 36-

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<sup>17</sup> In aggregating the shareholding data of the sample firms, we use the market capitalization in each point of time as the weighting index.

percentage point of the firm's common stock. From the increasing shareholding of the financial creditors, it is interesting to see whether the financial creditors also have the increasing role in the firm's management control—as indicated in Gilson (1990). It seems that our results on this matter do not follow that of Gilson because few changes in control have been observed in our study. It is interesting to find out why—in the Thai business culture of non-separation between ownership and control—the high ownership loss of pre-crisis owner coincided with the increasing shareholding of the financial creditors do not lead to the change in management control. This may be caused by three important factors; the nature of crisis, the market for corporate control, and the negotiation in debt restructuring. For the nature of the crisis, 1997 crisis is the systemic crisis that affects all of economic sectors. In the normal business circumstance, the financial creditor may take the control of the debtor firm—by sending the representative to the management and/or the board of director—if the debtor firm defaults on debt repayment.<sup>18</sup> But in the systemic crisis the creditor cannot have the capable representative to all of its insolvent debtors since it is also severely affected from the crisis.<sup>19</sup> Moreover, Thailand does not have the market for professional manager that the creditor can easily pick up them to replace the pre-crisis management like in the advanced countries (Siamwalla 2001). Stiglitz and Greewald (2003: 246) also indicates that in the systemic crisis, the existing management should be maintained since the firm distress might not be caused by bad management, and finding good alternative management and other disruptions with the management

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<sup>18</sup> One debtor of major creditor banks asserts that before the 1997 crisis it is usual to see that the creditor banks replaced the management positions of the insolvent debtor firms with their own representatives.

<sup>19</sup> Furthermore, Gilson (1990) finds that hostile takeover by creditor has been rarely observed.

change might create more cost. It means that after taking all of cost and benefit into account the financial creditor may choose to share the debtor firm's upside gain via the debt-equity swap rather than sending the representative to manage the debtor's firm. Vongvipanond and Wichiaksom (2005b) shows that debt-to-equity swap—associated with haircut—is frequently used as the restructuring method.

The debt negotiation is another important factor that can help the pre-crisis owner in maintaining his/her control. As indicated earlier that debt-to-equity swap is one of the most favourite method of debt restructuring. In some cases, the debt-to-equity swap is associated with the debt or equity buy-back options. Though the pre-crisis owner lost his/her ownership in high proportion, buy-back option is an important mean to regain his/her ownership. Some of our sample firms such as Millennium Steel (MS) and Srithai Superware (SITHAI) have the explicit buy-back option in the debt restructuring plan. There are also other firms that do not have explicit buy-back option but information from media indicates that some of them continually buy back their debt and stock. It means that pre-crisis owner might lose share ownership in short term in order to keep the control of the firm in the long term. However, it is worth to note that our results on the change in ownership and control are not the unusual phenomenon. Especially, when we look at the distribution of ownership and control change (Table 3) we find that the pre-crisis owners who lost their high proportion of their share ownership also lost the management control.<sup>20</sup> On the average, the pre-crisis owner, who lost the management control, lost around 80-percentage change of the share ownership (Table 4). It can still be concluded that high loss in share ownership may coincide with the loss in the management control.

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<sup>20</sup> For the details of change in ownership and control of each sample firm, please see Table 8



<Table 3>

<Table 4>

Although we cannot calculate the aggregate shareholding data in 2005 for the delisted companies, we can gauge from the ongoing listed samples that when the delisted are separated out there is no impact on the ownership change. This implies that the share ownership of the pre-crisis controlling shareholders of the delisted firms has changed—though some of them lost a lot. As for the delisted firm, other things being equal one would expect the delisted firm at any time to encounter the loss of ownership than the non-delisted firm. It might be possible that some distress companies chose the delisting as the exit way in order for him/her to keep his/her share ownership in the firm. Listed in the stock exchange is also the easy way to be taken over, regardless of the degree of insolvency the firm faces. For example, the pre-crisis controlling shareholder of Wongpaitoon Footwear (WFC) lost almost of his share ownership before the firm is delisted. Moreover, these delisted firms are not in the highly-distressed status. Table 5 shows that when we separate out the delisted firm, the degree of insolvency of the remaining listed firms is not changed much. In the group of delisted firms, there is no change in control. For the existence of new owners either financial or non-financial they hold the 14 per cent of the firm' shares in average.

<Table 5>

Results from Table 6 also indicate that our samples are concentrated in the groups of firm with high loss in ownership and control, and firm with small loss in ownership but still maintaining the control.

<Table 6>

Moreover, when we consider the control change in the sample firms by level of share ownership loss (Table 7), we find in either 25 or 50-percentage point criterion that most of our sample firms neither lost ownership nor control.

<Table 7>

Table 8 shows that salient features of change in ownership and control of the sample firms. Though most of their pre-crisis controlling shareholders lose the share ownership a lot, few of their controls have been changed. This result supports the above finding that loss in share ownership does not mean the loss in control. It might be possible that the pre-crisis controlling shareholder of these big firms can be re-emerged as the major shareholder who controls the firm again. It might be worth to note that in the longer term the ownership and control of Thai firms is still not separated. From these big firms, the loss of share ownership as well as the loss of control occurred during the restructuring process. Some of them lost the share ownership to its strategic partner but the pre-crisis controlling shareholder can still control the firm, Media of Medias (MEDIAS). One of them—SVOA—lost both of share ownership and control to its strategic partner. The other firms like Natural Park, Phayathai, Raimon Land, Siam Syntec, and Thai Petrochemical Industry, lost both of share ownership and control to the new comer.

<Table 8>

When we consider the change of ownership and control by the firm structure (Table 9), we find that the percentage change of ownership between the conglomerate

and stand alone are not much different. For the control change, the controlling shareholders of stand alone lost their control than those of conglomerate.

<Table 9>

Restructuring through CBC is another interesting feature to consider. Since we expect that the firm that restructures its debt through CBC is highly distressed so it needs the complicated method of debt restructuring including debt reduction.<sup>21</sup> However, the debt reduction is likely associated with the debt-to-equity swap, it means that there is possibility that the pre-crisis owner of the firm that restructures its debt through CBC might lose his/her share ownership—as well as control—in high proportion. Results from Table 4 confirm our expectation, the pre-crisis owner who uses the CBC as the restructuring mechanism lost his/her share ownership in higher proportion than that of who do not. For the control change, it is interesting to note that few control changes have been observed in both of CBC-based and out-of-court restructuring (Table 10). In the case of CBC-based restructuring, we might conclude in the first place that Thai bankruptcy reorganization law is quasi-Chapter 11. However, it cannot be concluded whether Thai insolvency system punishes the controlling shareholder because the law enforcement makes the bankruptcy reorganization law unpredictable.

<Table 10>

### *V.B Descriptive Statistics of the Sample Firms*

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<sup>21</sup> Our own calculation from sample firms shows that the CBC-based firm gets the debt reduction around 23 percent of total debt while the out-of-court firm gets around 20 percent. For the details of debt reduction of our sample firms, please see the Appendix B.

In this section, we will provide the general picture on the hypothesized determinants of change in share ownership. In consideration, we also separate out the delisted firms that their impact on the change in ownership seems to be trivial.

Our sample firms are concentrated in the property sector followed by the building materials, electronics, textiles, and agriculture, respectively (Table 11). On the average, the age of our sample firms is 20 years (Table 5). When we exclude the delisted firms, the significance of age has not changed. For their size, they have average asset around 10 Billion Baht. The smallest firm is SVI where its asset in 1996 was 496 Million Baht while the biggest firm is TNPC where its asset was 112 Billion Baht. Again, excluding the delisted does not affect the result negatively. In aggregate, our sample firms' nature of industry tends toward the labour-intensive type since their average asset per employee is only 20 Million Baht. Moreover, stand alone-type firms take the significant proportion in our sample.

<Table 11>

As it is well known for the Thai firm and also has been mentioned in the East-Asian crisis-related literature, our sample confirms the high leverage level of Thai firm before the crisis. Our sample firms also exhibit low returns on equity and retained earnings. The financial performance and leverage level have improved after we exclude the delisted firms. However, the degree of insolvency at the time entering to the restructuring process is not different between the non-delisted and the delisted firms.

On the average, our sample firms receive the debt reduction around 25-30 per cent of total debt at the time entering to the restructuring process. SYNTEC is the firm that gets the highest debt reduction. For the pre-crisis direct shareholding in the name

of founder only, we find that on the average he/she held the 20 per cent of the firm's total share.

In order to take care of the possible problem in the estimation, we also calculate the correlation among these variables. There is no sign of some possible troubles to the estimation since the pair-wise correlation coefficients are less than 0.25 except the correlation among pre-crisis leverage level, pre-crisis ownership performance, and pre-crisis reserve.<sup>22</sup> However, when the delisted sample is separated out the result has been improved.

#### *V.C Estimation Result*

Our main attention for the estimation is to find out the determinants of post-crisis change in ownership and control. On one hand, we would like to find the variables that explain the post-crisis change in ownership and control. On the other hand, we would like to assess the effect of the restructuring process as well as the effect of firm's distress on the change in its ownership and control. Though our study does not emerge as the new frontier in the ownership field, there is some literature that studies the effect of the debt restructuring to the change in ownership and control. Moreover, most of them consider this effect in the US-style corporate governance (Hotchkiss 1995; Gilson 1990; Gilson 1989). For our study, it is not only the Thai-style corporate governance that differs from that of US but also the study on the effect of restructuring—especially that resulted from the systemic crisis—to the change in ownership and control in East-Asian countries has not yet been made.

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<sup>22</sup> The correlation matrices appear in the Appendix C.

In the estimation, since we observe small change in ownership and no change in control of the delisted sample we examine the determinants of ownership change in two groups of sample, all samples and the non-delisted sample firm.

The results of the ownership-change model (Table 12) show that 7 out of 11 determinants have the expected sign including age, nature of industry, firm structure, pre-crisis reserve, degree of insolvency, debt reduction, and restructuring through court. 3 of these 7 variables are significantly related. For the variables that have the opposite sign, the relatively high level of z statistic prevents us from dropping them from the model. After the delisted sample is deleted, the result has been deteriorated. The pseudo  $R^2$  has been decreased from 12.7 per cent to 12.1 per cent. However, since our estimation is across the firm we may not give major importance to the  $R^2$  level. After we checked for the robustness, we find that no problems of multicollinearity, heteroscedasticity, and specification errors existed.

<Table 12>

From the estimation result, we can conclude from the determinants that have high level of z statistic that in the firm with higher age, level of pre-crisis reserve, and pre-crisis direct shareholding, its pre-crisis controlling shareholder has small loss of share ownership. The pre-crisis controlling shareholder of the firm that gets higher level of debt reduction has high loss in share ownership. Though some variables that their coefficients are insignificant but have the expected sign, we can have some explanations that the labour intensive and stand alone-type firm with higher degree of insolvency at the time entering the restructuring process and uses the CBC as the restructuring mechanism, its controlling shareholder has high loss of share

ownership.<sup>23</sup> The determinants of size, pre-crisis leverage level, pre-crisis ownership performance, and pre-crisis direct shareholding of controlling shareholder only have the opposite sign and are striking our perception. This may be possible that from our both sample groups the pre-crisis controlling shareholder who also held the high amount of pre-crisis direct shareholding of owner only and lost large proportion of share ownership. While the controlling shareholder of the relatively big firm lost his/her share ownership less than the relatively small one. It might be possible that the controlling shareholder of the big firm may have more negotiation power, and is less likely to lose his/her share ownership. Moreover, the result also shows that though in the pre-crisis time the firm had high leverage level and poor ownership performance, its pre-crisis controlling shareholder lost less. From these two variables, it can be implied that the creditors who would like to share the potential upside gain of the firm may look at the firm's pre-crisis leverage level and ownership performance. The better the pre-crisis financial status, the more likely the creditors would like to share the upside gain of the firm. However, we cannot conclude from the above explanation due to the statistical insignificances of the variables.

In the control-change model, after we adjust and find the most appropriate model specification, we get five independent variables for the control-change model. The estimates from the control-change model yield the similar results with that of ownership-change model (Table 13). 3 out of 5 coefficients have the expected sign while most of them are statistically significant both in the all sample and non-delisted sample. It means that the controlling shareholder of the CBC-based firm with short

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<sup>23</sup> Our finding on degree of insolvency is consistent with Gilson (1990), which indicates that the insolvency leads to the change in ownership and control of the distressed firm.

age, small size, low level of pre-crisis reserve, and high level of debt reduction lost his/her management control. The pre-crisis controlling shareholder can use the firm's pre-crisis reserve to safeguard his/her management control. Moreover, it is obvious that the insolvent firm that gets high level of debt reduction, its controlling shareholder has high possibility to lose share ownership and management control of the firm. In using CBC as the restructuring mechanism, it is worth to note that though in the ownership-change model it might not be obvious that the controlling shareholder of the firm that restructures through CBC might lose his/her share ownership but for the control there is high possibility to lose the management control if he/she uses CBC as the restructuring mechanism. However, it does not mean that restructuring through CBC always lead to the control change since there are a lot of firms that restructuring through CBC but its controlling shareholder does not lose the management control.

<Table 13>

From the results of these two models, our assumption that the ownership change is consistent or complementary with the control change might not be valid. It seems that the ownership change is substituted for the control change. Especially, when we find that the pre-crisis direct shareholding of controlling shareholder is an important determinant of the ownership change but it is irrelevant for the control change. We might conclude that loss in ownership is not always associated with loss in control.

Though our estimation models and results can be improved in terms of refinement, we think from the results that our models has some implication especially



for anyone who expects to use it in simulating the ownership and control change of a firm.

When we compare our results—from the estimation and other analyses—with those of Gilson and Hotchkiss (Gilson 1989; Gilson 1990; Gilson et al. 1990; Hotchkiss 1995), which find that management turnover is an outcome of debt restructuring and also retaining the pre-bankruptcy management is associated with the poor post-bankruptcy performance. There are three main factors that make our results different from those of Gilson and Hotchkiss. They are the nature of the crisis, the market for professional manager or corporate control, and the negotiation in restructuring process (for details of discussion please see the section V.A). Moreover, in the Thai context the debtor-in-possession is strongly associated with the better post-crisis corporate performance (Vongvipanond and Wichitaksorn 2005a). This emphasizes the role of human specific of original owner in determining the restructuring outcome. While the Chapter 11-like Thai bankruptcy reorganization law can also be taken to explain the circumstances that are opposite to those of US.

## ***VI. Concluding Remark***

The systemic crisis in 1997 caused the massive restructuring in many Thai corporations. The debt restructuring process determines the ownership and control loss of the insolvent firms. Although their controlling shareholder lost 40-percentage point or the 60-percentage change of share ownership, he/she can still maintain the control of the firm. The estimation on the determinants of pre- and post-crisis ownership and control change captures theoretical expectation and yields the satisfactory results. It might be concluded that loss in ownership is not always associated with loss in control. The results also shed some light on the implication to

simulate the change in ownership of an insolvent firm. However, more refinements are still in need. The in-depth and specific analysis on the effect of conglomerate-type corporations, court versus out-of-court-restructuring, and delisting status should be explored.

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**Table 1: Shareholding of Pre-crisis Owner of the Delisted Companies**

<i>Company</i>	<i>Shareholding of Pre-crisis Owner (%)</i>		<i>Year of Entering Rehabco</i>	<i>Delisting Year</i>
	<i>1996</i>	<i>Before-delisted<sup>1</sup></i>		
BIJOUX	48.20	46.99	1998	2000
CMG	30.00	39.12	1998	2000
CNTRY	63.79	50.55	1998	2003
GRANIT	50.71	35.70	1998	1999
NSTAR	64.52	62.43	1998	1999
O-LAP	30.82	29.07	1999	2000
ONE	43.81	30.58	1998	2000
ONONO	61.80	59.98	1998	1999
RENOWN	48.03	48.98	1999	2001
S-CHEM	29.51	29.51	1999	2000
SS	63.53	63.53	1998	1999
T-FISH	51.06	48.43	1998	2000
TMP	63.11	55.22	1998	2000
WFC	55.81	0.79	2000	2003

Notes:<sup>1</sup>We cannot obtain the August 2005 data from the delisted companies due to their delisting status. So the updatest data from the delisted companies are before-delisted.

**Table 2: Ownership and Control of the Sample Firms<sup>1</sup>**

	<i>All (69)</i>	<i>Listing (55)</i>	<i>Delisted (14)</i>
<i>Ownership=Control (in 1996)</i>			
Yes	65	51	14
No	4	4	0
<i>Manager (in 1996)</i>			
Inside	53	40	13
Outside	16	15	1
<i>Shareholding of Controlling Shareholder<sup>2</sup> (%)</i>			
1996	63.91	64.59	52.99
2005	24.05	24.05	na
<i>Control Change</i>			
Yes	18	18	0
No	51	37	14
<i>Shareholding of New Owner<sup>2</sup> (%)</i>			
	13.87	13.84	na
<i>Shareholding of Financial Institution<sup>2</sup> (%)</i>			
1996	6.93	6.45	14.59
2005	14.52	14.46	na

Notes:<sup>1</sup>As of August 2005

<sup>2</sup>We cannot obtain the August 2005 data from the delisted companies due to their delisting status. So the updatest data from the delisted companies are before-delisted.

**Table 3: Distribution of Ownership and Control Change**

<i>Ownership Change</i>		<i>Control Change</i>	
<i>Level of % Change</i>	<i>No. of firms</i>	<i>No. of firms</i>	
$\leq 25\%$	32	3	
$25\% < X \leq 50\%$	8	0	
$50\% < X \leq 75\%$	11	4	
$> 75\%$	18	11	
<b><i>Total</i></b>	<b><i>69</i></b>	<b><i>18</i></b>	

**Table 4: Some Findings on Ownership Change**

	<i>Shareholding (Percentage Point)</i>		<i>Ownership Change</i>	
	<i>1996</i>	<i>2005</i>	<i>Absolute</i>	<i>Percentage</i>
<i>All</i>				
Court	65.35	23.78	-41.57	-63.62
Out-of-Court	47.90	25.98	-21.92	-45.76
<i>Non-Delisted</i>				
Court	65.66	23.79	-41.87	-63.77
Out-of-Court	45.52	25.92	-19.60	-43.07
<i>All</i>				
Control Change	59.35	12.29	-47.06	-79.29
No Control Change	66.79	36.73	-30.06	-45.00
<i>Non-Delisted</i>				
No Control Change	68.25	36.79	-31.46	-46.10

**Table 5: Descriptive Statistics of Sample Data**

<i>Category</i>	<i>Unit</i>	<i>Variable Name</i>	<i>Min</i>	<i>Max</i>	<i>Mean<sup>1</sup></i>	<i>Median</i>
Firm's characters						
Year of establishment	No. of year <sup>2</sup>	Age				
- <i>All</i>			8	66	19	15
- <i>Non-Delisted</i>			8	66	20	17
Total assets <sup>3</sup>	Million Baht	Size				
- <i>All</i>			495.6	112,376.0	10,742.3	4,224.9
- <i>Non-Delisted</i>			495.6	112,376.0	12,445.1	5,147.0
Total assets per employee <sup>4</sup>	Million Baht	Nature of Industry				
- <i>All</i>			0.12	440.54	19.79	3.55
- <i>Non-Delisted</i>			0.12	440.54	20.01	2.95
Structure	No. of firms	Structure				
- <i>All</i>		<i>Conglomerate</i>	22	47		
- <i>Non-Delisted</i>		<i>Stand alone</i>	21	34		
Firm's financial performance and distress						
Debt/Equity <sup>3</sup>	Ratio	Pre-crisis leverage level	<i>Min</i>	<i>Max</i>	<i>Mean<sup>1</sup></i>	<i>Median</i>
- <i>All</i>			0.01	56.22	3.75	2.39
- <i>Non-Delisted</i>			0.01	11.93	2.57	2.28
Gross returns/Equity <sup>3</sup>	Ratio	Pre-crisis ownership performance				
- <i>All</i>			-4.40	2.95	0.16	0.19
- <i>Non-Delisted</i>			-0.64	2.95	0.24	0.20
Retained earnings/Equity <sup>3</sup>	Ratio	Pre-crisis reserve				
- <i>All</i>			-9.17	0.89	-0.44	0.01
- <i>Non-Delisted</i>			-6.62	0.89	-0.27	0.04
Debt/Asset <sup>5</sup>	Ratio	Degree of insolvency				
- <i>All</i>			0.07	12.86	1.48	1.22
- <i>Non-Delisted</i>			0.07	12.86	1.47	1.18



**Table 5 (Cont.)**

<i>Category</i>	<i>Unit</i>	<i>Variable Name</i>	<i>Min</i>	<i>Max</i>	<i>Mean<sup>1</sup></i>	<i>Median</i>
Nature of restructuring						
Profit from restructuring/Debt <sup>6</sup>	%	Debt reduction				
- <i>All</i>			0.00	96.11	24.94	12.86
- <i>Non-Delisted</i>			0.00	96.11	31.05	22.40
Restructuring through Bankruptcy Court	No. of firms	Restructuring through court	<i>Court</i>	<i>Out-of-Court</i>		
- <i>All</i>			47	22		
- <i>Non-Delisted</i>			40	15		
Firm's shareholding						
Owner's direct-holding shares/Total shares <sup>3</sup>	%	Pre-crisis direct shareholding of controlling shareholder only	<i>Min</i>	<i>Max</i>	<i>Mean<sup>1</sup></i>	<i>Median</i>
- <i>All</i>			0.00	92.18	20.24	18.79
- <i>Non-Delisted</i>			0.00	92.18	21.19	18.79

Notes: <sup>1</sup>Unweighted average<sup>2</sup>1996 minus year of establishment<sup>3</sup>In 1996<sup>4</sup>In 1994<sup>5</sup>At the time of entering the Rehabco or the restructuring process<sup>6</sup>Cumulative profit from restructuring in 1998-2005/Debt at the time of entering the Rehabco or the restructuring process

Gross returns = earnings before interest, tax, depreciation, and amortization (EBITDA)

**Table 6: Sample Firms by Level of Ownership and Control Change**

$\leq 25\%$		$25% < , \text{but } \leq 50\%$		$50% < , \text{but } \leq 75\%$		$> 75\%$	
<i>Control Change</i>		<i>Control Change</i>		<i>Control Change</i>		<i>Control Change</i>	
<i>Yes (3)</i>	<i>No (29)</i>	<i>Yes (0)</i>	<i>No (8)</i>	<i>Yes (4)</i>	<i>No (7)</i>	<i>Yes (11)</i>	<i>No (7)</i>
SMC	ABICO		BH	N-PARK	ITD	DTM	MEDIAS
TPROP	ASIA		GEN	SAICO	JAS	KC	MGR
TUNTEX	BIJOUX		GRANIT	SKR	KMC	PP	MS
	BRC		ONE	TNPC	TEM	PYT	PF
	BSI		RCI		THECO	RAIMON	RANCH
	CMG		SITHAI		THL	SVI	TGPRO
	CNT		STEC		TYONG	SVOA	WFC
	CNTRY		TPIPL			SYNTEC	
	CPICO					TDT	
	DISTAR					TPI	
	IFEC					WIN	
	KKC						
	MDX						
	NSTAR						
	O-LAP						
	ONONO						
	PE						
	PE&T						
	RENOWN						
	ROBINS						
	S-CHEM						
	SMPC						
	SRI						
	SS						
	SUNTEC						
	T-FISH						
	TM						
	TWC						
	TWP						

**Table 7: Number of Sample Firms Classified by Change in Ownership and Control**

	unit: number of firms	
	<i>50%-point</i>	<i>25%-point</i>
Lost both	8	14
Lost ownership only	14	11
Lost control only	10	4
Neither lost ownership nor control	37	40
<b><i>Total</i></b>	<b><i>69</i></b>	<b><i>69</i></b>

**Table 8: Change in Ownership and Control of Sample Firms**

Company	Shareholding of Pre-crisis Owner (%)		Ownership Change		Control Change	Pre-Crisis Owner	New Owner	Shareholding of New Owner (%)
	1996	2005	Absolute	Percentage				
ABICO	53.18	40.12	-13.06	-24.56	No	Chirathivat Family	-	-
ASIA	79.06	80.00	0.94	1.19	No	Techaruvichit Family	-	-
BH	45.32	26.37	-18.95	-41.81	No	Sophonpanich Family	-	-
BIJOUX	48.20	46.99	-1.21	-2.51	No	Ho Family	-	-
BRC	36.68	42.54	5.86	15.98	No	Chokwatana Family	-	-
BSI	64.55	59.04	-5.51	-8.54	No	Tangtrongsakdi Family	-	-
CMG	30.00	39.12	9.12	30.40	No	Kiatfuengfoo and Snitwong Families	-	-
CNT	55.83	82.32	26.49	47.45	No	Crown Property Bureau	-	-
CNTRY	63.79	50.55	-13.24	-20.76	No	Taechaubol Family	-	-
CPICO	57.64	56.69	-0.95	-1.65	No	Srisomburanant Family	-	-
DISTAR	65.04	52.35	-12.69	-19.51	No	AMCOL Holding Limited	-	-
DTM	19.44	0.74	-18.70	-96.19	Yes	Prachoubmoh Family	Laohapholwattana Family	12.62
GEN	49.47	28.41	-21.06	-42.57	No	Chatikavanij Family	-	-
GRANIT	50.71	35.70	-15.01	-29.60	No	Songpaibool Family	-	-
IFEC	48.67	51.37	2.70	5.55	No	Chokwatana Family	-	-
ITD	83.69	39.35	-44.34	-52.98	No	Karnasuta Family	-	-
JAS	68.29	25.47	-42.82	-62.70	No	Bodharamik Family	-	-
KC	47.95	0.00	-47.95	-100.00	Yes	Angkanawatana Family	Ngam-atchariyakul Family	61.61
KKC	56.55	72.54	15.99	28.28	No	Simakulthorn Family	-	-
KMC	15.65	6.74	-8.91	-56.93	No	Krisdathanont Family	-	-
MDX	64.77	69.40	4.63	7.15	No	Hetrakul Family	-	-
MEDIAS	62.56	12.88	-49.68	-79.41	No	Suwinijit and Boonkrong Families	Channel 7	71.60

**Table 8 (Cont.)**

Company	Shareholding of Pre-crisis Owner (%)		Ownership Change		Control Change	Pre-Crisis Owner	New Owner	Shareholding of New Owner (%)
	1996	2005	Absolute	Percentage				
MGR	63.02	7.15	-55.87	-88.65	No	Limthongkul Family	-	-
MS	36.30	1.80	-34.50	-95.04	No	Horrungruang Family	-	-
N-PARK	63.66	16.08	-47.58	-74.74	Yes	Protpakorn and Jaruthavee Families	Nominees of Tycoon-Cum Leader <sup>1</sup>	38.93
NSTAR	64.52	62.43	-2.09	-3.24	No	Adisayathepkul Family	-	-
O-LAP	30.82	29.07	-1.75	-5.68	No	Tangkatat Family	-	-
ONE	43.81	30.58	-13.23	-30.20	No	Chakkaphak Family	-	-
ONONO	61.80	59.98	-1.82	-2.94	No	Supphanichwong Family	-	-
PE	85.92	89.77	3.85	4.48	No	Osathanugrah Family	-	-
PE&T	67.34	95.76	28.42	42.20	No	Pongsathorn and Osathanugrah Families	-	-
PF	41.92	7.99	-33.93	-80.94	No	Ngow-sirimanee Family	-	-
PP	56.51	0.00	-56.51	-100.00	Yes	Eurvilaichit Family	Manosutthi and Susaewee Families	44.08
PYT	25.38	2.50	-22.88	-90.15	Yes	Ourairat Family	Nominees of Tycoon-Cum Leader <sup>1</sup>	70.91
RAIMON	64.42	0.00	-64.42	-100.00	Yes	E bonython/Srikraiwin Family	Financial Institution	27.23
RANCH	47.68	0.45	-47.23	-99.06	No	Suchaowanich Family	-	-
RCI	52.45	32.20	-20.25	-38.61	No	Kittipraporn Family	-	-
RENOWN	48.03	48.98	0.95	1.98	No	Nopburanand Family	-	-
ROBINS	57.28	54.66	-2.62	-4.57	No	Chirathivat Family	-	-
SAICO	31.80	14.83	-16.97	-53.36	Yes	Kalayanarut Family and Taiwanese Group	Cirio Del Monte	44.41
S-CHEM	29.51	29.51	0.00	0.00	No	Ratanarat Family	-	-
SITHAI	55.34	37.83	-17.51	-31.64	No	Lertsumitkul Family	-	-
SKR	45.50	17.21	-28.29	-62.18	Yes	Wongphat Family	Saengthaweeb Family	6.08

**Table 8 (Cont.)**

Company	Shareholding of Pre-crisis Owner (%)		Ownership Change		Control Change	Pre-Crisis Owner	New Owner	Shareholding of New Owner (%)
	1996	2005	Absolute	Percentage				
SMC	52.41	65.66	13.25	25.28	Yes	E bonython/Srikraiwin Family	Volvo Car Corp.	12.04
SMPC	48.29	48.69	0.40	0.83	No	Ekahitanond Family	-	-
SRI	65.71	67.92	2.21	3.36	No	Jantaranukul Family	-	-
SS	63.53	63.53	0.00	0.00	No	Boondicharern Family	-	-
STEC	42.09	30.97	-11.12	-26.42	No	Charnvirakul Family	-	-
SUNTEC	40.70	51.83	11.13	27.35	No	Chindapradist and Horrungruang Families	-	-
SVI	94.50	0.00	-94.50	-100.00	Yes	Harnworakiat Family	DBS Vickers	74.16
SVOA	68.08	4.30	-63.78	-93.68	Yes	Viriyaprapaikit Family	Inkthanes Family	17.94
SYNTEC	47.83	0.00	-47.83	-100.00	Yes	Leeswadtrakul Family	Nominees of Tycoon-Cum Leader <sup>1</sup>	27.89
TDT	92.18	0.00	-92.18	-100.00	Yes	Rujanawong Family and Tianjin Da Zhonghua	Denduanguedee Family	12.11
TEM	60.29	24.07	-36.22	-60.08	No	Kanjanasakchai Family	-	-
T-FISH	51.06	48.43	-2.63	-5.15	No	Masayavanich Family	-	-
TGPRO	51.74	0.00	-51.74	-100.00	No	Leelaprachakul Family	Thai Financial Creditors	55.95
THECO	50.81	15.93	-34.88	-68.65	No	Kittikoraart and Lisahapanya Families	-	-
THL	46.41	12.90	-33.51	-72.20	No	Sino Pac	-	-
TM	60.00	60.00	0.00	0.00	No	Panamaneechot Family	-	-
TNPC	42.20	15.39	-26.81	-63.53	Yes	Mangkornkarn Family	Thai Financial Creditors	57.69
TPI	62.32	12.70	-49.62	-79.62	Yes	Leopairut Family	Financial Creditors	24.16
TPIPL	69.43	51.12	-18.31	-26.37	No	Leopairut Family	-	-
TPROP	6.52	23.71	17.19	263.65	Yes	Chaipayungpan Family	Tiyawuttirojjanakul and Bowornsombat Families	44.80

**Table 8 (Cont.)**

<i>Company</i>	<i>Shareholding of Pre-crisis Owner (%)</i>		<i>Ownership Change</i>		<i>Control Change</i>	<i>Pre-Crisis Owner</i>	<i>New Owner</i>	<i>Shareholding of New Owner (%)</i>
	<i>1996</i>	<i>2005</i>	<i>Absolute</i>	<i>Percentage</i>				
TUNTEX	71.82	76.86	5.04	7.02	Yes	Tuntex Group and Sophonpanich Family	Tuntex Group	-
TWC	56.93	62.59	5.66	9.94	No	Ho Family	-	-
TWP	59.57	49.98	-9.59	-16.10	No	Nganthavee Family	-	-
TYONG	48.03	22.38	-25.65	-53.40	No	Kanjanapas and Liptawat Families	-	-
WFC	55.81	0.79	-55.02	-98.58	No	Wongpaitoonpiya and Kiatfuengfoo Families	Financial Creditors	72.37
WIN	52.33	0.00	-52.33	-100.00	Yes	Teletech International and Capetronic Holdings	Wongsawasdi Family	71.35

Notes: <sup>1</sup>We borrow the word “Tycoon-Cum Leader” from Bunkanwanicha and Wiwattanakantang (2005).

**Table 9: Ownership and Control Change by Firm Structure**

	<i>Shareholding (Percentage Point)</i>		<i>Ownership Change</i>		<i>Control Change</i>
	<i>1996</i>	<i>2005</i>	<i>Absolute</i>	<i>Percentage</i>	<i>No. of firms</i>
<i>All</i>					
Conglomerate	67.56	24.70	-42.86	-63.44	5
Stand Alone	57.96	19.71	-38.24	-65.99	13
<i>Non-Delisted</i>					
Conglomerate	67.87	24.70	-43.17	-63.60	5
Stand Alone	58.50	19.70	-38.80	-66.33	13

**Table 10: Some Findings on Control Change**

<i>All Samples</i>			
<i>Court</i>		<i>Out-of-Court</i>	
<i>Control Change</i>	<i>No Control Change</i>	<i>Control Change</i>	<i>No Control Change</i>
11	36	7	15
<i>Non-Delisted Samples</i>			
<i>Court</i>		<i>Out-of-Court</i>	
<i>Control Change</i>	<i>No Control Change</i>	<i>Control Change</i>	<i>No Control Change</i>
11	29	7	8

**Table 11: Sample Firms by Industry**

<i>Sector</i>	<i>No. of firms</i>	<i>%</i>
Property	13	18.8
Building materials	9	13.0
Electronics	7	10.1
Textiles	6	8.7
Agriculture	5	7.2
Chemicals and Petrochemicals	3	4.3
Health	3	4.3
Automotive	3	4.3
Others	20	29.0
<b><i>Total</i></b>	<b><i>69</i></b>	<b><i>100.0</i></b>

**Table 12: Ordered Probit Estimation Results (Ownership Change)**

<i>Dependent Variable</i> <i>Independent Variables</i>	<i>Ownership Change<sup>1</sup></i>	
	<i>All</i>	<i>Non-Delisted</i>
Constant	-1.5182 (-0.88)	-0.8651 (-0.44)
Age (ln)	-0.5572 (-1.57)	-0.4143 (-1.03)
Size (ln)	0.2773 (1.47)	0.2034 (0.96)
Nature of Industry (ln)	-0.1243 (-0.97)	-0.0083 (0.05)
Firm Structure <sup>2</sup>	-0.2596 (-0.65)	-0.2733 (-0.68)
Pre-crisis Leverage Level	-0.0230 (-0.46)	-0.2324 (-1.53)
Pre-crisis Ownership Performance	0.3123 (0.82)	1.0962 (0.96)
Pre-crisis Reserve	-0.2205 (-1.34)	-0.4976 * (-1.65)
Degree of Insolvency	0.0423 (0.15)	0.0089 (0.03)
Debt Reduction	0.0130 ** (2.36)	0.0100 (1.53)
Restructuring through Court <sup>3</sup>	0.4305 (0.98)	0.3507 (0.70)
Pre-crisis Direct Shareholding of Controlling Shareholder only	0.0204 * (1.81)	0.0203 * (1.71)
Pseudo R <sup>2</sup>	0.1266	0.1208
Prob. (LR)	0.0257	0.1023
Number of Observations	69	55

Notes: The figures in parentheses are the z-statistics.

\* and \*\* indicate the significant levels of 10 per cent and 5 per cent, respectively.

<sup>1</sup>≤25% = 0, >25% but ≤50% = 1, >50% percent but ≤75% = 2, and >75% = 3.

<sup>2</sup>Stand alone = 0 and conglomerate = 1.

<sup>3</sup>Out-of-court = 0 and restructuring through bankruptcy court = 1.



**Table 13: Logit Estimation Results (Control Change)**

<i>Dependent Variable</i> <i>Independent Variables</i>	<i>Control Change (Dummy)<sup>1</sup></i>	
	<i>All</i>	<i>Non-Delisted</i>
Constant	-3.6683 (-1.20)	-1.9736 (-0.59)
Age (ln)	-1.0774 (-1.57)	-1.3774 * (-1.78)
Size (ln)	0.6245 ** (1.99)	0.5769 * (1.82)
Pre-crisis Reserve	-0.3300 * (-1.82)	-0.5607 * (-1.89)
Debt Reduction	0.0478 *** (3.45)	0.0391 *** (2.78)
Restructuring through Court <sup>2</sup>	-2.1232 ** (-2.42)	-2.1142 ** (-2.36)
% Correct	79.71	76.36
Number of Observations	69	55

Notes: The figures in parentheses are the z-statistics.

\*, \*\*, and \*\*\* indicate the significant levels of 10 per cent, 5 per cent, and 1 per cent, respectively.

<sup>1</sup>No change = 0 and change = 1.

<sup>2</sup>Out-of-court = 0 and restructuring through bankruptcy court = 1.

## Appendix A

### List of Sample Firms

<i>No.</i>	<i>Symbol</i>	<i>Company</i>	<i>Current Status</i>	<i>Year of Entering Rehabco/Restructuring</i>
1	ABICO	ABICO HOLDINGS	Rehabco (Agribusiness)	1998
2	ASIA	ASIA HOTEL	Rehabco (Hotels & Travel Services)	2002
3	BH	BUMRUNGRAD HOSPITAL	Health Care Services	2000
4	BIJOUX	BIJOUX HOLDINGS	Delisted (2000)	1998
5	BRC	BANGKOK RUBBER	Rehabco (Textiles)	2004
6	BSI	BANGKOK STEEL INDUSTRY	Rehabco (Construction Materials)	1999
7	CMG	CHAOPHYA MARBLE-GRANITE	Delisted (2000)	1998
8	CNT	CHRISTIANI & NIELSEN (THAI)	Property Development	1998
9	CNTRY	COUNTRY(THAILAND)	Delisted (2003)	1998
10	CPICO	CENTRAL PAPER INDUSTRY	Rehabco (Paper & Printing Materials)	2001
11	DISTAR	DISTAR ELECTRIC CORPORATION	Electrical Products and Computer	2002
12	DTM	DATAMAT	Rehabco (Paper & Printing Materials)	1998
13	GEN	GENERAL ENGINEERING	Construction Materials	2002
14	GRANIT	THAI GRANITE	Delisted (1999)	1998
15	IFEC	INTER FAR EAST ENGINEERING	Rehabco (Electrical Products & Computer)	1999
16	KC	K.C. PROPERTY	Rehabco (Property Development)	1999
17	KKC	KULTHORN KIRBY	Electrical Products & Computer	1999
18	KMC	KRISDAMAHANAKORN	Property Development	1999
19	MDX	M.D.X.	Rehabco (Property Development)	1999
20	MEDIAS	MEDIA OF MEDIAS	Entertainment & Recreation	2000
21	MGR	MANAGER MEDIA GROUP	Rehabco (Property Development)	1998
22	MS	MILLENNIUM STEEL	Construction Materials	1999
23	N-PARK	NATURAL PARK	Property Development	1999
24	NSTAR	NORTH STAR	Delisted (1999)	1998
25	O-LAP	ORIENTAL LAPIDARY	Delisted (2000)	1999
26	ONE	ONE HOLDING	Delisted (2000)	1998
27	ONONO	THAI ONONO	Delisted (1999)	1998
28	PE	PREMIER ENTERPRISE	Rehabco (Commerce)	1998
29	PE&T	PREMIER ENGINEERING & TECHNOLOGY	Rehabco (Automotive)	1998
30	PF	PROPERTY PERFECT	Property Development	1999
31	PP	POWER-P	Rehabco (Construction Materials)	1999
32	PYT	PRASIT PATANA	Rehabco (Health Care Services)	2001
33	RAIMON	RAIMON LAND	Property Development	1999
34	RANCH	BANGKOK RANCH	Rehabco (Agribusiness)	1998
35	RCI	THE ROYAL CERAMIC INDUSTRY	Construction Materials	2002
36	RENOWN	RENOWN LEATHERWARES	Delisted (2001)	1999
37	ROBINS	ROBINSON DEPARTMENT STORE	Commerce	2000
38	SAICO	THE SIAM AGRO-INDUSTRY PINEAPPLE AND OTHERS	Rehabco (Food and Beverage)	1998
39	S-CHEM	THE SIAM CHEMICAL	Delisted (2000)	1999

<i>No.</i>	<i>Symbol</i>	<i>Company</i>	<i>Current Status</i>	<i>Year of Entering Rehabco/Restructuring</i>
40	SKR	SIKARIN	Health Care Services	2000
41	SMC	SWEDISH MOTORS CORPORATION	Automotive	1999
42	SMPC	SAHAMITR PRESSURE CONTAINER	Rehabco (Packaging)	1998
43	SRI	SRITHAI FOOD & BEVERAGE	Rehabco (Agribusiness)	2004
44	SS	SUNSHINE	Delisted (1999)	1998
45	STEC	SINO-THAI ENGINEERING AND CONSTRUCTION	Property Development	2000
46	SUNTEC	SUN TECH GROUP	Rehabco	1999
47	SVI	SVI	Electronic Components	1998
48	SVOA	SVOA	Electrical Products and Computer	1998
49	SYNTEC	SYNTEC CONSTRUCTION	Property Development	1998
50	TDT	THAI DURABLE GROUP	Rehabco (Textiles)	1998
51	TEM	THAI ENGINE MANUFACTURING	Rehabco (Machinery & Equipment)	2001
52	T-FISH	THAI FISHERIES	Delisted (2000)	1998
53	TGPRO	THAI-GERMAN PRODUCTS	Rehabco (Construction Materials)	1998
54	THECO	THAI HEAT EXCHANGE	Rehabco (Automotive)	2001
55	THL	TONGKAH HARBOUR	Rehabco (Mining)	1998
56	TMP	THAI MELON POLYESTER	Delisted (2000)	1998
57	TNPC	THAI NAM PLASTIC	Rehabco (Petrochemicals & Chemicals)	1998
58	TPI	THAI PETROCHEMICAL INDUSTRY	Rehabco (Petrochemicals & Chemicals)	2001
59	TPROP	THAI PROPERTY	Rehabco (Property Development)	2000
60	TUNTEX	TUNTEX (THAILAND)	Rehabco (Textiles)	2004
61	TWC	THAI WAH	Rehabco (Agribusiness)	2001
62	TWP	THAI WIRE PRODUCTS	Rehabco (Construction Materials)	2003
63	TYONG	TANAYONG	Rehabco (Property Development)	2001
64	WFC	WONGPAITON GROUP	Delisted (2003)	2000
65	WIN	WYNCOAST INDUSTRIAL PARK	Rehabco (Electrical Products & Computer)	2003
66	ITD	ITALIAN-THAI DEVELOPMENT	Property Development	2001
67	TPIPL	TPI POLENE	Construction Materials	2000
68	JAS	JASMINE INTERNATIONAL	Communication	2002
69	SITHAI	SRITHAI SUPERWARE	Household Goods	1999

**Appendix B**  
**Level of Debt Reduction by Sample Firms**

<i>Company</i>	<i>% of Total Debt<sup>1</sup></i>	<i>Company</i>	<i>% of Total Debt<sup>1</sup></i>	<i>Company</i>	<i>% of Total Debt<sup>1</sup></i>	<i>Company</i>	<i>% of Total Debt<sup>1</sup></i>
ABICO	23.00	MEDIAS	59.37	S-CHEM	0.00	TPI	12.64
ASIA	22.40	MGR	6.43	SKR	32.39	TPROP	61.53
BH	11.27	MS	0.00	SMC	14.93	TUNTEX	33.95
BIJOUX	0.00	N-PARK	64.16	SMPC	14.50	TWC	3.98
BRC	8.90	NSTAR	0.00	SRI	3.45	TWP	66.05
BSI	10.75	O-LAP	0.00	SS	0.00	TYONG	1.50
CMG	0.00	ONE	3.81	STEC	6.31	WFC	1.89
CNT	30.15	ONONO	0.00	SUNTEC	0.09	WIN	0.00
CNTRY	7.47	PE	80.04	SVI	0.00	ITD	25.95
CPICO	1.33	PE&T	53.34	SVOA	83.89	TPIPL	11.83
DISTAR	12.86	PF	35.09	SYNTEC	96.11	JAS	15.20
DTM	47.83	PP	85.42	TDT	48.06	SITHAI	0.00
GEN	62.36	PYT	61.34	TEM	0.00		
GRANIT	0.00	RAIMON	91.79	T-FISH	0.00		
IFEC	40.46	RANCH	74.05	TGPRO	21.94		
KC	27.56	RCI	61.68	THECO	17.22		
KKC	4.60	RENOWN	0.00	THL	0.00		
KMC	30.76	ROBINS	76.68	TMP	0.00		
MDX	17.62	SAICO	22.95	TNPC	12.25		

Note: <sup>1</sup>Cumulative profit from restructuring in 1998-2005/Debt at the time of entering the Rehabco or the restructuring process

**Appendix C.1**  
**Correlation Matrix of All Samples**

	OWNCHA	AGE	SIZE	DIRECTSHA	RESERVE	LEVERAGE	PERFORM	INSOLVEN	STRUCTURE	REDUCTION	INDUSTRY	COURT
OWNCHA	1.0000	0.2335	-0.1258	-0.4364	0.0661	0.0777	-0.0295	-0.1275	0.1383	-0.2505	-0.0524	-0.0944
AGE	0.2335	1.0000	0.0243	0.0587	-0.1819	0.0206	-0.0384	-0.1505	0.1719	-0.1069	-0.1743	-0.1014
SIZE	-0.1258	0.0243	1.0000	0.0234	0.1227	-0.0996	0.0484	-0.0925	0.2426	-0.0519	0.1399	0.0769
DIRECTSHA	-0.4364	0.0587	0.0234	1.0000	-0.2449	0.1314	-0.1438	-0.0298	-0.2481	-0.0176	-0.0141	-0.2107
RESERVE	0.0661	-0.1819	0.1227	-0.2449	1.0000	-0.7855	0.6893	-0.0142	0.0789	0.1569	0.0989	0.0926
LEVERAGE	0.0777	0.0206	-0.0996	0.1314	-0.7855	1.0000	-0.7303	-0.0422	-0.0849	-0.1439	0.0386	0.0459
PERFORM	-0.0295	-0.0384	0.0484	-0.1438	0.6893	-0.7303	1.0000	0.0371	0.0481	0.1618	0.4439	0.0615
INSOLVEN	-0.1275	-0.1505	-0.0925	-0.0298	-0.0142	-0.0422	0.0371	1.0000	-0.0983	-0.0591	-0.0438	0.0404
STRUCTURE	0.1383	0.1719	0.2426	-0.2481	0.0789	-0.0849	0.0481	-0.0983	1.0000	0.1248	-0.0849	0.3346
REDUCTION	-0.2505	-0.1069	-0.0519	-0.0176	0.1569	-0.1439	0.1618	-0.0591	0.1248	1.0000	0.0276	0.2448
INDUSTRY	-0.0524	-0.1743	0.1399	-0.0141	0.0989	0.0386	0.4439	-0.0438	-0.0849	0.0276	1.0000	0.1097
COURT	-0.0944	-0.1014	0.0769	-0.2107	0.0926	0.0459	0.0615	0.0404	0.3346	0.2448	0.1097	1.0000

**Appendix C.2**  
**Correlation Matrix of Non-delisted Sample**

	OWNCHA	AGE	SIZE	DIRECTSHA	RESERVE	LEVERAGE	PERFORM	INSOLVEN	STRUCTURE	REDUCTION	INDUSTRY	COURT
OWNCHA	1.0000	0.2513	-0.0863	-0.4883	0.1637	0.1051	0.0092	-0.1212	0.2370	-0.1740	-0.0565	0.0059
AGE	0.2513	1.0000	0.0203	0.0447	-0.2341	0.1890	-0.1700	-0.1632	0.2154	-0.1548	-0.1871	-0.0214
SIZE	-0.0863	0.0203	1.0000	0.0034	0.1278	-0.1386	0.0029	-0.0937	0.2043	-0.1443	0.1392	0.0305
DIRECTSHA	-0.4883	0.0447	0.0034	1.0000	-0.2029	0.0202	-0.1009	-0.0401	-0.2879	-0.0801	-0.0486	-0.2541
RESERVE	0.1637	-0.2341	0.1278	-0.2029	1.0000	-0.6088	0.3910	-0.0476	0.0302	0.1151	0.1398	0.1749
LEVERAGE	0.1051	0.1890	-0.1386	0.0202	-0.6088	1.0000	0.2002	-0.0865	0.1001	0.0203	0.2353	0.1002
PERFORM	0.0092	-0.1700	0.0029	-0.1009	0.3910	0.2002	1.0000	0.0142	-0.0866	0.1133	0.7795	0.1970
INSOLVEN	-0.1212	-0.1632	-0.0937	-0.0401	-0.0476	-0.0865	0.0142	1.0000	-0.0999	-0.0590	-0.0384	0.0713
STRUCTURE	0.2370	0.2154	0.2043	-0.2879	0.0302	0.1001	-0.0866	-0.0999	1.0000	0.0072	-0.1098	0.3132
REDUCTION	-0.1740	-0.1548	-0.1443	-0.0801	0.1151	0.0203	0.1133	-0.0590	0.0072	1.0000	0.0228	0.1987
INDUSTRY	-0.0565	-0.1871	0.1392	-0.0486	0.1398	0.2353	0.7795	-0.0384	-0.1098	0.0228	1.0000	0.1290
COURT	0.0059	-0.0214	0.0305	-0.2541	0.1749	0.1002	0.1970	0.0713	0.3132	0.1987	0.1290	1.0000