# Expropriation of Minority Shareholders in East Asia

Stijn Claessens, Simeon Djankov , Joseph Fan, and Larry Lang[1]

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**Abstract**

We examine the evidence on expropriation of minority shareholders in publicly-traded companies in East Asia, by studying separately the effects of cash-flow and voting rights of the controlling shareholder on market valuation. Higher cash-flow rights are associated with higher valuation, consistent with the findings of Jensen and Meckling (1976) for the effects of concentration of management control in the United States. In contrast, concentration of control rights has a negative effect on firm value, consistent with Morck et al. (1988) and Shleifer and Vishny (1997). Separation of voting from cash-flow rights¾through the use of dual-class shares, pyramiding, and cross-holdings¾is especially associated with lower market values. We conclude that the risk of expropriation is the major principal-agent problem for public corporations in East Asia.

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## I. Introduction

The benefits of large investors in enhancing the value of the firm have been the subject of extensive research. Block-holders can alleviate one of the main principal-agent problems in the modern corporation, i.e., the conflict of interest between shareholders and managers. Large investors have the power and means to monitor managers and ensure that they act in the best interest of shareholders. This monitoring is shown to result in higher firm value.[2] There has been less investigation on the costs associated with the presence of large investors and, in particular, on their ability to expropriate other stakeholders. Expropriation is defined as the process of using one's control powers to maximize own welfare and redistribute wealth from others. Theory suggests, however, that incentives for expropriation exist and are especially strong when control rights exceed ownership rights.

In this paper, we fill a gap in the existing literature by providing evidence to suggest that controlling shareholders in some East Asian countries expropriate minority shareholders. Using a large database of publicly-traded corporations in nine countries, we find a positive relationship between expropriation and the separation of cash-flow from voting rights. We conclude that the primary agency issue for large corporations in East Asia is limiting expropriation of minority

[2] For a survey of the literature on the benefits of large shareholders, see section IV in Shleifer and Vishny (1997). In the most extreme cases, Shleifer and Vishny (1986) show that large investors oust management through proxy fights or takeovers if the latter pursue empire-building strategies at the expense of equity holders.

shareholders by controlling shareholders, rather than restricting empire building by unaccountable managers.

In previous work (Claessens, Djankov, and Lang, 2000), we have documented a large divergence between cash-flow and voting rights for corporations across nine East Asian countries. Control in these countries is often enhanced through the use of pyramid structures and cross-holdings among firms. The analysis here suggests that for these corporations high cash-flow rights in the hands of block-holders raise market valuation, consistent with the Jensen and Meckling (1976) model. We also find, however, a negative effect of high concentration of control on firm value. This is supportive of the argument that once "large owners gain nearly full control of the company, they prefer to generate private benefits of control that are not shared by minority shareholders" (Shleifer and Vishny, 1997, p.759). Separation of cash-flow from voting rights is especially associated with lower market values, consistent with Grossman and Hart (1988) and Harris and Raviv (1988). We interpret the value discount as evidence of expropriation of minority shareholders by controlling shareholders. Conversely, Morck et al. (1988) show that when managers are also controlling shareholders, i.e., even when the possibility of entrenchment is higher, firms trade at a premium within a certain range. This finding suggests that when ownership and control go together, these is less incentive for non-value-maximizing behavior, although the opportunity of engaging in such behavior increases.

The paper is structured as follows. Section II summarizes the existing literature on the costs of large shareholders. Section III describes the data sample and the construction of the ownership and control variables. Section IV shows the construction of the expropriation measure. Section V investigates the evidence on small shareholder expropriation in East Asia.

and the effect of different types of ownership on expropriation. Section VI provides a robustness analysis by reporting the regression results for each country. Section VII concludes.

## II. The Cost of Large Investors

The research on the topic of ownership structures and corporate valuation dates back to Berle and Means (1932) and has found renewed interest following the contributions by Jensen and Meckling (1976) and Morck et al. (1988). Berle and Means show that diffuse control rights yield significant power in the hands of managers whose interests do not coincide with the interest of shareholders. As a result, corporate resources are not used for the maximization of shareholders' value. Jensen and Meckling conclude that concentrated ownership is beneficial for corporate valuation, because large shareholders are better at monitoring managers (and because it reduces transaction costs in negotiating and enforcing corporate contracts with various stakeholders). Morck et al. suggests that the absence of separation between ownership and control reduces conflicts-of-interest and thus increases shareholder value. Further empirical studies on data for the United States (e.g., Lease et al., 1984; DeAngelo and DeAngelo, 1985; Shleifer and Vishny, 1986; Holderness and Sheehan, 1988; Barclay and Holderness, 1989; McConnell and Servaes, 1990) find a positive relation between ownership concentration (in certain ranges) and corporate valuation.[3]

[3] Other studies (Demsetz, 1983; Demsetz and Lehn, 1985) argue that the relation is spurious. While greater ownership concentration results in stronger incentives to monitor, investors may be inhibited from taking value-maximizing positions in firms if the costs associated with amassing large stakes are

There is recent empirical evidence that concentrated ownership can also harm market valuation. Shleifer and Vishny (1997), La Porta et al. (1998), and Morck et al. (1999) study the conflicts of interest between large and small shareholders. When large shareholders effectively control a corporation, their policies may result in the expropriation of minority shareholders. The conflicts of interest between large and small shareholders can include outright expropriation, i.e., controlling shareholders enriching themselves by not paying out dividends, or transferring profits to other companies they control; or *de facto* expropriation through the pursuit of nonprofit-maximizing objectives by large investors. Such companies are unattractive to small shareholders and their shares are valued less relative to their market peers. Morck et al. (1999) show that, in the case of Canadian publicly traded companies, openness of capital markets mitigates the ill effects of concentrated control.

To our knowledge, the expropriation-of-minority-shareholders hypothesis has not been investigated directly. Several previous papers focus on the costs of large block-holdings, interpreting the premium that shares with superior voting rights attract as evidence of private benefits of control.[4] Such premia vary between 3% and 5.2% for the United States, and are about 81% for Italy. This set of papers either assumes or finds strong congruence of interests

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high. If transaction costs are low, each firm would have the optimal, but not necessarily concentrated, ownership structure.

[4] Studies include Bergstrom and Rydqvist (1990) for Sweden, Barclay and Holderness (1989) and Zingales (1995) for the United States, Zingales (1994) for Italy, Megginson (1990) for the United Kingdom, Robinson and White (1990) for Canada, Horner (1988) for Switzerland, and Levy (1982) for Israel.

between large and small shareholders and argues that the voting premia reflect the expectation that voting rights become important in takeover battles. Shleifer and Summers (1988) point more specifically to the expropriation of extramarginal benefits to insiders, including incumbent managers, if a hostile takeover succeeds. Morck et al. (1988) further suggest that takeovers limit the extent of non-value-maximizing behavior on the part of insiders.

Another strand of the literature studies the link between ownership structures and expropriation of different classes of stakeholders. Malitz (1989) examines debt restructurings in the United States for evidence of expropriation of bondholders' wealth by block-holders of equity and rejects this hypothesis. Slovin and Sushka (1997) study the expropriation of shareholders in subsidiary companies by the parent company in listed stocks in the United States and do not find sufficient evidence to suggest expropriation behavior. Weinstein and Yafeh (1998) find that Japanese firms affiliated to bank-controlled groups pay higher interest rates on their liabilities than unaffiliated companies, and interpret this result as evidence that banks expropriate other classes of stakeholders. Other studies on corporate governance in Japan (Aoki, 1990; Prowse, 1992; Hoshi, Kashyap, and Scharfstein, 1991; Kaplan, 1994) also find adverse effects of group affiliation on market valuation of firms.

Few studies on ownership structure have investigated the effects of separation of cash-flow and voting rights on firm value, even though the theoretical property rights literature developed by Grossman and Hart (1988) and Harris and Raviv (1988) distinguishes ownership and control. Burkart, Gromb, and Panunzi (1997) use the separation of ownership and control to examine the trade-off between ownership structure and managerial initiative. They conclude that concentration of voting rights is beneficial in terms of enhancing effective monitoring of managers,

but reduces their non-contractible efforts since it brings about an ex-ante expropriation threat to managers. Burkart, Gromb, and Panunzi (1998) analyze the separation of cash-flow and voting rights; they argue that the under-concentration of cash-flow rights increases moral hazard and leads to inefficiencies. The model suggests expropriation of minority shareholders, as the controlling party allocates some corporate resources to the production of private benefits. Wolfenzon (1999) develops a model where the entrepreneur can decide between a horizontal (an independent concern) or a pyramidal structure (as a subsidiary of a company he already controls) for his newly-established firm. The model predicts a higher incidence of pyramidal structures in countries with poor investor protection, as such structures can be used by the entrepreneur to expropriate other shareholders. Finally, Bebchuk (1999) develops a model to show that when the private benefits of control are large, as is the case in industries or countries with protected markets, maintaining a lock on control through separation of ownership and control would enable the initial shareholders to retain a larger share of the rents.

More recently, La Porta et al. (2000) document large differences between countries in the breadth and depth of financial markets and the access of firms to external financing. They suggest that a common element in explaining these differences is the extent to which investors, both shareholders and creditors, are protected by law from expropriation by the controlling shareholders or the managers of firms. La Porta et al. (1999b) provide direct support for the quantitative importance of the expropriation of minority shareholders in many countries, as well as the role of the law in limiting such expropriation.

An empirical literature on the separation of ownership and control has also recently emerged. The seminal study on the means used to enhance corporate control is La Porta, Lopez-

de-Silanes, and Shleifer (1999a), who investigate the separation of ownership and control in over 600 corporations in 27 rich countries. They find that pyramid structures are the most effective means used to enhance control, and that dual-class shares are rarely used, even in countries where their usage has been allowed for a long time. Two case-studies on Italy (Aganin and Volpin, 1998; Enriques, 1998) use a similar methodology to document various means used to separate ownership and control.[5]

Claessens, Djankov, and Lang (2000) extend the analysis of ownership and control patterns of La Porta et al. (1999a) to nine East Asian countries (Hong Kong, Indonesia, Japan, Korea (South), Malaysia, the Philippines, Singapore, Taiwan and Thailand). They find large family control in more than half of East Asian corporations. Corporations in Japan are generally widely-held, while corporations in Indonesia and Thailand are mainly family-controlled. Separation of management from ownership control is rare, with management of two-third of firms family-related to the controlling owner. The last finding suggests that the main principal-agent problem is East Asia is not the conflict of interest between owners and managers, as those frequently coincide even in the largest publicly-traded corporations.

## III. Measuring Ownership and Control Rights

[5] Enriques (1999) is part of an on-going project funded by the European Corporate Governance network. Working papers on other European countries include Gugler, Stomper, and Zechner (1999) on the separation of ownership and control in listed Austrian companies; Becht and Chapelle (1999) on listed Belgian companies; Bloch and Kremp (1999) on listed French companies; and De Jong, Kabir, Marra, and Roell (1999) on public companies in the Netherlands.

The analysis is based on newly-assembled data for publicly-traded corporations, including both financial institutions and non-financial institutions, in Hong Kong, Indonesia, Japan, Korea, Malaysia, the Philippines, Singapore, Taiwan, and Thailand. As the starting point for our data collection, we use the Worldscope database which provides the names and holdings of the largest owners for most firm – 79% of our sample. The database has been used in previous studies of corporate ownership structure (La Porta et al. (1999a) and Lins and Servaes (1999)).

We supplement the Worldscope data with ownership information from the Asian Company Handbook 1999, the Japan Company Handbook 1999, Hong Kong Company Handbook 1997, the Handbook of Indonesian Companies 1996, the Philippine Stock Exchange Investments Guide 1997, the Securities Exchange of Thailand Companies Handbook 1997, and the Singapore Investment Guide to complete the ownership profiles of the remaining 21% of the sample (Table A1). We exclude companies which have proxy ownership that cannot be traced to a specific owner. In all cases, we collect the ownership structure as of December 1996 or the end of the 1996 fiscal year. Information on dual-class shares is provided in Datastream, as described in Nenova (1999). We supplement these data with country-specific sources for Indonesia, the Philippines, Singapore, and Thailand, where Datastream covers a smaller fraction of listed companies. We also use various country sources on business group affiliation to study the pyramid structures and cross-holdings among group-affiliated firms (Table A1). For the purposes of this paper, we define groups as composed of all firms in which a given controlling shareholder has an equity stake. This definition makes it easier to break ties when firms have multiple

controlling shareholders. We end up with 2,980 companies for which we can trace the ultimate owners.

In all nine East Asian countries, members of a business group are required to report separate accounting data. If inter-group ownership concentration is high, the group also has to supply a consolidated account statement. For example, a Korean chaebol which has more than 30% inter-group holdings is required to report a consolidated statement. At the company level, we use consolidated account data when it is disclosed. Information is provided by Worldscope whether all subsidiaries are consolidated, whether consolidation covers only the most significant subsidiaries, or whether the report is on a cost basis (unconsolidated). If a company changes its consolidation practice, this change is also recorded in the data. We include all companies, both with consolidated and unconsolidated reports, in the regression analysis. This is not a significant problem here since we have the sales data for each segment of the company and consolidate up to the level of the firm, as shown in Section IV. When we include only companies that report consolidated data, as defined in Worldscope, we get qualitatively similar results.

Following La Porta, et al. (1999a), we analyze the ownership pattern of companies by studying ultimate shareholdings. In the majority of cases, the principal shareholders are themselves corporate entities, not-for-profit foundations, or financial institutions. We then identify their owners, the owners of their owners, etc. We do not distinguish among individual family members and use the family group as a unit of analysis. We divide corporations into widely-held and corporations with ultimate owners. A widely-held corporation is defined as a corporation which does not have any owner who has 10% or more of control rights. In an alternative specification, we use a 20% cut-off for control rights in the hands of the largest block-

holder. Ultimate owners are further separated into four categories: families including individuals who have large stakes, the state, widely-held financial institutions such as banks and insurance companies, and widely-held corporations.

Our study of expropriation uses data on both cash-flow and voting rights. Suppose, for example, that a family owns 11% of the stock of publicly-traded Firm A, which in turn has 21% of the stock of Firm B. We then say that the family controls 11% of Firm B¾the weakest link in the chain of voting rights. In contrast, we say that the family owns about 2% of the cash flow rights of Firm B, the product of the two ownership stakes along the chain. We make the distinction between cash-flow and voting rights by documenting for each firm pyramiding structures, cross-holdings among firms, and deviations from one-share-one-vote rules.

To better understand the variety of ownership structures that determine the ultimate control of companies, we provide an example. The example shows some of the complications in the construction of ultimate ownership and the wealth of data necessary to ensure proper tracing of the ultimate owners in East Asian corporations. For the remainder of the paper, we use only the listed companies in the definition of a business group. Many companies affiliated with business groups in East Asia are unlisted and are not covered in this paper. For example, at the end of 1996 the largest three business groups in Korea—Hyundai, Samsung, and LuckyGoldstar—had 46, 55, and 48 affiliated firms respectively. Of those, only 16, 14, and 11 were publicly-listed companies, respectively. Since data on unlisted affiliates are unavailable, we cannot extend our analysis to unlisted firms.

Figure 1 shows the main holdings of Yasuda Life Insurance, the principal shareholder in the Fuyo group, which is the fourth largest keiretsu in Japan. Yasuda Life is a widely-held financial institution, since its largest shareholder controls only 1.1% of the voting rights. Two of its holdings, Marubeni Corporation and Showa Denko, have dual-class shares owned by Yasuda Life Insurance. In the case of Marubeni Corp., a third of Yasuda Life's shares have two votes each. These are in fact the only superior-voting shares of Marubeni, enhancing the control rights of Yasuda Life to 6.5% of all votes.[6] A similar pattern is observed in the ownership structure of Showa Denko – Yasuda Life has about a fifth of its shares with superior voting rights, and these are the only shares that deviate from the one-share-one-vote rule. Studying the ownership and control stakes in Figure 1, it does not seem that Yasuda Life has control over 10% of any company in the Fuyo group. This inference turns out to be incorrect, as we will show next.

Figure 2 shows one of the branches in the pyramid structure of the Fuyo group, by looking at the holdings of Yasuda Trust Bank, the second largest member of the group in terms of market capitalization. Two facts are worth noting. First, Yasuda Trust does not have superior-class shares in any of its companies. This is typically the case in East Asian corporations, as documented in Claessens, Djankov, and Lang (2000). Second, seven of the nine companies where Yasuda Trust holds significant stakes are also companies directly controlled by Yasuda Life, which constitutes an example of cross-holdings among group members. This provides an additional conduit for Yasuda Life to concentrate control, and to separate it from ownership.

[6] Note that one can also observe cash-flow rights in excess of voting rights, if some of the other shareholders own superior–class shares, or if the shareholder has non-voting shares.

Figure 3 provides the ownership and control stakes of Fuji Bank, the third largest member of the Fuyo group in terms of market capitalization. As in the case of Yasuda Trust, Fuji Bank holds stakes in seven of the companies under the direct ownership of Yasuda Life, another example of cross-holdings among affiliates of the Fuyo group. Among the holdings of Fuji Bank, we document both pyramidal structures (denoted with solid lines) and cross-holdings (denoted with dotted lines). Fuji Bank has C&V 4.7% in Marubeni Corp., which in turn has C&V 32.4% in Toyo Sugar. Similarly, Fuji Bank has C&V 5% in Yasuda Fire and Marine Insurance (Yasuda F&M), which in turn holds C&V 12.6% in Tatamono Inc. Fuji Bank also holds C&V 16.8% in Yasuda Trust, which in turn has C&V 6.3% in Toa Corporation. Fuji Bank also holds C&V 5.2% in Toa Corporation directly, which is an example of a cross-holding.

The analysis in Figures 1-3 suggests that there exists a complex network of cross-holdings among the members of the Fuyo group, which serve to enhance the ownership and control concentration in the hands of Yasuda Life Insurance. We document the holdings of each of the companies in the group and construct a cross-holding matrix for the nine major companies (Table 1). This table allows us to find the ultimate ownership and control structure of each major company in the Fuyo group. In effect, the table is similar to an input-output matrix where the owners are listed in the rows, and the owned firms are listed in the columns. A larger matrix (not reported here) includes cross-holdings among all 42 Fuyo listed affiliates present in our sample.

The rows in the table indicate the ownership and control stakes in the company listed in each column. For example, Yasuda Life holds C&V 4.4% in Fuji Bank, C&V 7.5% in Oki Electric, C&V 8.6% in Yasuda Trust, etc. These numbers match the numbers reported in Figure 1. Similarly, Yasuda Trust holds C&V 2.8% in Fuji Bank, C&V 4.9% in Oki Electric, etc., i.e., the

numbers reported in Figure 3. We use the information in Table 1 to calculate Yasuda Life's ultimate cash-flow and voting rights in Fuji Bank. Yasuda Life has a direct C&V stake of 4.4%, and indirect stakes through Oki Electric, Yasuda Trust, Marubeni Corp., Yasuda Fire and Marine, Nippon Seiko, Nihon Cement, and Showa Denko. The indirect stake in Oki Electric enhances Yasuda Life's cash-flow rights in Fuji Bank by 0.5625 percentage points (the product of 7.5 and 7.5) and voting rights by 7.5 percentage points (which is the minimum of the two 7.5 stakes). The indirect stake in Yasuda Trust enhances Yasuda Life's cash flow rights in Fuji Bank by 0.2408 percentage points (the product of 8.6 and 2.8) and voting rights by 2.8 percentage points (the weakest link in the chain of voting rights). Once we sum up all the direct and indirect stakes in Fuji Bank, we reach the conclusion that Yasuda Life owns 5.4469% of Fuji Bank and controls 19.9% of the voting rights. Using the cross-holding structure described in Figures 1-3, Yasuda Life has almost quadrupled its control over Fuji Bank!

The examples in Figures 1-3 show that ultimate ownership and control are described both by their level, and by the type of controlling shareholder. From a corporate governance standpoint, the relevant indicator is the share of ultimate voting rights, as it enables owners to determine dividend policies, investment projects, personnel appointments, etc. We start by reporting the aggregate statistics on the distribution of ultimate control among the five ownership groups identified in the previous section (Table 2). We study ultimate control at two cut-off levels, 10% and 20% of voting rights. This allows us to describe the differences in the concentration of control in the individual firms across the nine East Asian countries.

There are large differences across countries in the distribution of ultimate control at the 10% (benchmark) level. Japan, for example, has also only 13.1% of companies in family hands

as compared to over half of companies in most other countries (the Philippines has slightly over 40%). Japan has only 58% of companies which are controlled by a large shareholder, while the remaining eight countries typically have almost all corporations under the control of large investors. Indonesia, for example, has more than two-thirds (68.6%) of its publicly-listed companies in family hands, and only 0.6% are widely-held. Almost a quarter (23.6%) of the publicly-traded companies in Singapore are state-controlled.

At the 20% cut-off level the differences across countries widen. Only 20.2% of Japanese companies are controlled by a single large investor and less than one-tenth (9.7%) are controlled by families. An even more dramatic change takes place in Korea, where only 56.8% of companies are now controlled by large investors, and Taiwan, where 73.8% of companies now have a controlling large shareholder. In the Indonesian sample, the share of family control increases at the expense of state, widely-held financial, and widely-held corporate control. A similar pattern can be observed for Thailand where family control increases from 56.5% to 61.6%, and Malaysia, where family control increases from 57.5% to 67.2%. The most stable control structure between these two cut-off levels is observed for the Philippines and Singapore.

Table 3 reports descriptive statistics on the concentration of cash-flow and voting rights of East Asian corporations in the hands of the largest controlling holder, and the separation of ownership and control. Only companies that have a large investor holding at least 10% of the voting rights are included in panel A, while panel B includes companies where the largest shareholder holds at least 20% of the voting rights. Among the 2,980 companies in the database, 2,371 companies, or 79.5% of the total sample, enter panel A, and 1,654 companies, or 55.5% of the sample, are included in panel B. Of those, we document a difference between cash-flow and

voting rights for the largest shareholder for 1,101 and 674 companies, respectively. The remaining companies do not have any deviations of voting from cash-flow rights. The least number of companies where control exceeds ownership, both in absolute terms and relative to the size of the country sample, are found in the Philippines and Thailand.

Thai corporations also display the most concentrated cash-flow rights, 36.577% on average, followed by Indonesian companies, with 27.712%, and Hong Kong companies, with 27.519%. Japanese, Korean, and Taiwanese corporations have the least concentration of cash-flow rights, 10.843%, 20.839%, and 20.215% respectively. The concentration of voting rights in the hands of the largest block-holder is similar to the concentration of cash-flow rights, with Thai and Indonesian companies having the highest concentration, 39.042% and 36.669% respectively, followed by Malaysian and Hong Kong companies, 31.633% and 31.834% respectively. The least concentration of control is documented in Japan, Korea, and Taiwan, 15.801%, 23.942%, and 24.335% respectively. The last three columns show the ratio of cash-flow to voting rights, which we use as the measure of separation of ownership and control in the regression analysis. The separation of control from ownership is on average the highest in Japan (0.606), Indonesia (0.758), and Singapore (0.742), and the lowest in the Philippines (0.892) and Thailand (0.941). A similar pattern of concentration and separation of cash-flow and voting rights is observed in panel B, except for Japan where the ratio of cash-flow to voting rights increases from 0.606 to 0.814.

The means by which cash-flow right are separated from control rights for the nine East Asian countries have been previously documented in Claessens, Djankov, and Lang (2000). Deviations from one-share-one-vote rules are rare across East Asian countries. On average,

control of 20% of the vote can be received with 19.7% of the cash-flow rights. Instead, pyramiding is most frequently used to de-couple cash-flow and control rights. In particular, two-thirds of Indonesian firms in the sample have pyramiding ownership structures, as have approximately half of the firm in the sample in Korea, the Philippines, Singapore, and Taiwan. The smallest share of firms involved in pyramiding structures is recorded in Thailand. Finally, 10.7% of the firms in the sample have cross-holdings in other firms. This percentage is the highest for firms in Singapore, Malaysia, and Japan, 15.7%, 14.9%, and 11.7% respectively, and the lowest for firms in Indonesia and Thailand, where less than 1% of firms have cross-holdings.

## IV. Measuring Expropriation

Researchers have employed Tobin's q to measure the discount in market values resulting from expropriation (Morck, Shleifer, and Vishny, 1988; Barclay and Holderness, 1989; McConnell and Servaes, 1990; Zingales, 1994, among others). It is constructed as the market value of assets divided by the replacement cost of assets. To net out industry-wide effects, previous papers also make adjustments to firms' Tobin's q. Specifically, they use the firm's primary sector code to find matching firms and compare the firm's Tobin's q with the median Tobin's q of the matching sample.

The financial data we have do not allow the computation of Tobin's q, as the replacement cost of assets is unavailable for all countries.[7] Comparing a firm's Tobin's q with its industry

[7] We are also limited in other financial data we have on a consistent basis across all nine East Asian countries. Worldscope adjusts the reporting in the income statement and balance sheets of corporations to make it consistent with international accounting standards. While this is generally

median is also inappropriate in case of East Asian corporations, since, as Lins and Servaes (1999) and Claessens, Djankov, Fan, and Lang (1999) show, many East Asian firms have sales in multiple segments. To overcome these difficulties and following the approach started by Berger and Ofek (1995), we calculate an industry-adjusted, excess market valuation measure as the ratio of the firm's actual market value to its imputed value. This excess value measure has often been used to evaluate the impact of firm diversification on market valuation. It is also appropriate as a measure to study the effects of ownership structure on market values as it provides a relative value, by taking the ratio of market value to sales or assets, while adjusting (by construction) for industry differences. We first present the formal procedure for constructing the excess variable measure and then follow with an example from the data.

Specifically, the excess value variable, EXV, is calculated as follows. First, we compute the market-to-sales ratio as the firm's market capitalization, the stock price times the number of outstanding shares, divided by sales revenue.[8] We then multiply the industry-median ratio, defined as the median value of EXV among all single segment firms in the industry, by the level of sales in each corresponding segment of a firm. The imputed value of the firm is then obtained by summing the multiples across all segments. We hence rely only on stock market prices and sales

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straightforward for income statement items, the assets and liabilities numbers may include different categories across the nine East Asian countries. In Indonesia, Japan, Korea, and Thailand, for example, companies are not required to report intra-group lending, which distorts the balance sheet data.

data net of excise taxes in the construction of the valuation variable. These are all flow figures and less affected by the differences in accounting standards across the sample countries. All financial data are converted to US dollars using end-year exchange rates.

For the sales segment data we rely on the historical segment sales data collected by Worldscope. If such information is not provided for a particular firm, we supplement the segment data from various issues of the Asian Company Handbook and the Japan Company Handbook. We exclude a small number of firms from the sample because they do not report segment sales. For the remaining firms, we determine the industry sectors to which they belong according to the two-digit Standard Industry Classification (SIC) system, and collect the sales revenues from the firm's activity in each sector.[9]

We restrict the number of single-segment firms to be at least three when computing the median market-to-sales ratio of an industry. When a two-digit SIC industry has fewer than three single-segment firms, we use the median ratio of the corresponding broad industry group as

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[8] Berger and Ofek (1995) calculate market values relative to both assets and sales by segment. Asian firms generally do not report assets breakdown by segments. We therefore can calculate the ratio of market values to sales only (see also the discussion in Lins and Servaes (1999)).

[9] If a segment can not be associated with a reported SIC code, we determine the segment's SIC code according to its business description. If a segment is associated with multiple SIC codes, it is broken down equally so that each segment is associated with one SIC code. We classify firms as single-segment if at least 90 percent of their total sales are derived from one two-digit SIC segment. Firms are classified as multi-segment if they operate in more than one two-digit SIC code industries and none of their two-digit SIC code segments accounts for more than 90 percent of total firm sales.

defined by Campbell (1996).[10] When an industry, even defined broadly, has fewer than three single-segment firms, we use the median of all firms in the country. This procedure avoids the loss of observations but could introduce a bias in the excess value measure. The bias is inversely related to the availability of single-segment firms. For most firms in our sample, we are able to find matching single-segment firms at the narrow or broad industry group level. We therefore do not expect such bias to be significant.

We use Amsteel Corporation BHD, the third largest steel producer in Malaysia, to illustrate the excess value measure we construct (Table 4). The market-to-sales ratio of Amsteel is 1.62, the ratio of total market capitalization (US$3,120 million) to total sales (US$1,929 million). We are able to identify nine steel producing Malaysian firms in the sample. Their median market-to-sales ratio is 1.68. Dividing Amsteel's ratio by the median industry ratio for steel firms, we obtain the conventional industry-adjusted value, 0.96. By this measure, Amsteel's performance is roughly comparable to the rest of the industry.

However, as shown in Panel B, steel sales accounts for only 24 percent of Amsteel's total sales revenues. The remaining 76 percent of revenues come from five other industries: retailing and distribution (23%), motors (23%), food and agricultural products (12%), computers (11%),

[10] The sectors are defined as follows: Petroleum industry (SIC 13 and 29); Finance and Real Estate (SIC 60-69); Consumer Durables (SIC 25, 30, 36, 37, 50, 55, and 57); Basic Industry (SIC 10, 12, 14, 24, 26, 28, 33); Food and Tobacco (SIC 1, 20, 21, 54); Construction (SIC 15-17, 32, 52); Capital Goods (SIC 34, 35, and 38); Transportation (SIC 40-42, 44, 45, and 47); Utilities (SIC 46, 48, and 49); Textiles and Trade (SIC 22-23, 31, 51, 53, 56, 59); Services (SIC 72-73, 75, 80, 82, 89); and Leisure (SIC 27, 58, 70, 78-79).

and property development (7%). Using the conventional method of matching firms by industry peers, the performance of the non-steel segments, which comprise three-quarters of the firm's revenues, is left unadjusted. Moreover, the matching firms could be diversified firms as well. In fact, of the nine steel-producing firms in Malaysia, only four are single-segment firms. The remaining five firms also operate in non-steel industries. The median ratio computed for these firms thus does not properly reflect the valuation of the steel industry in Malaysia.

To mitigate these problems, we adjust industry performance at the segment level instead of the firm level. For each of the Amsteel's six segments, we restrict its industry-matching firms to be single-segment firms. We first select firms that generate over 90 percent of revenues from one 2-digit SIC industry. We find four such firms for the steel segment and five for the food and agricultural segment. We are not able to find a sufficient number of single-segment firms for the remaining four segments. For these segments, we search for single-segment firms within the broad industry groups as defined by Campbell (1996). We are able to find at least three matching firms for all four segments.

Once the appropriate matching firms are identified, we compute the median market-to-sales ratios for each of the segments. These ratios are reported in the last column of Panel B. To obtain Amsteel's imputed market-to-sales ratio, we multiply each of the segment ratios by the corresponding sales revenue fractions and sum the multiples across the six segments. The imputed ratio is 2.50. It is substantially higher than 1.68, the median market-to-sales ratio computed using the conventional method. The difference derives from two sources. First, the steel segment's market-to-sales ratio (2.35), estimated from single-segment firms, is quite different from the ratio (1.68) computed in the conventional method which includes both single-

and multi-segment firms. Second, the six industries have different median market-to-sales ratios which range from 1.65 (the Motors segment) to 4.96 (the Property segment). The weighted average across the six segments is thus higher than the conventional measure. We next multiply Amsteel's imputed market-to-sales ratio by total sales revenue to obtain the imputed valuation, US$4,823 million. Dividing actual value by imputed value, we obtain a revised value ratio of 0.65. By this measure, Amsteel has considerably under-performed its industry peers.[11]

## V. Evidence of expropriation of minority shareholders

We seek evidence for the following three hypotheses derived from the existing theoretical literature. First, the value of the firm is expected to be increasing in the concentration of cash-flow rights in the hands of block-holders, as suggested by Jensen and Meckling (1976). Second, a negative effect is expected on firm value from concentrated voting rights. This is because once "large owners gain nearly full control of the company, they prefer to generate private benefits of control that are not shared by minority shareholders" (Shleifer and Vishny, 1997, p.759). Finally, we expect to find that firm valuation is an increasing function in the ratio of cash-flow to

[11] The market valuation variable, EXV, is a preferred measure compared to accounting variables in measuring expropriation of minority shareholders. This is because accounting measures, such as net income, will not capture the degree of expropriation currently taking place as well as the expropriation expected to happen in the future. Expropriation would, however, be captured by the net-income-to-price ratio. Morck et al. (1988) and McConnell and Servaes (1990) use a similar measure to study the effect of management entrenchment.

voting rights, as the benefits of expropriation rise with the wedge between cash-flow and voting rights as argued in Grossman and Hart (1988) and Harris and Raviv (1988).

We start by regressing market valuation, EXV, on cash-flow and voting rights, focusing on the pooled (across countries) results and using linear relations. We employ the following regression models:

**(1)** EXV = Intercept + b1*CASH + b2*CES + u

**(2)** EXV = Intercept + b1*VOTES + b2*CES + u

**(3)** EXV = Intercept + b1*CASH + b2*VOTES + b3*(CASH/VOTES) + b4*CES + u

where EXV is excess value, CASH is cash-flow rights of the largest block-holder, VOTES is the voting rights of the largest block-holder, and CASH/VOTES is the ratio of cash-flow to voting rights of the largest block-holder. We include the capital expenditures over sales ratio, CES, as a control variable, following Lang and Stulz (1994). This ratio accounts for investment opportunities available to the firm. Country dummies are not included since the valuation measure is industry-adjusted using the firms within each country. Thus, the median single-segment firm in each country has an access value of zero. When we do include country dummies to test the robustness of the estimation, however, they are jointly insignificant. We employ the ordinary least-square (OLS) method in the regression analysis, since the dependent variable is not limited.

We start with the sample of corporations which have a block-holder with at least 10% of votes. We find that higher cash-flow rights by the largest block-holder are positively related to excess valuation (Table 5, panel A). The coefficient on the CASH variable is 0.4984, and is statistically significant at the 1% level. The concentration of voting rights of the largest block-

holder is negatively, but not significantly, related to excess valuation (column 2), with a coefficient of –0.2116, suggesting that higher concentration of control leads to the expropriation of minority shareholders. The separation of ownership and control yields a negative effect on market valuation¾the sign on CASH/VOTES is significantly positive (column 3), consistent with the hypothesis that deviations of voting from cash-flow rights are associated with expropriation. The parameter estimate is 0.5991 with a t-statistic of 10.9074. The regressions result suggests that, at the margin, a 10 percentage points increase in the separation between cash-flow and voting rights leads to a market discount of 6 percentage points. In this specification, voting rights continue to have a negative and significant effect on market valuation, with a coefficient of –0.6057 (and a t-statistic of 4.5542).

We also find that market valuation is positively associated with higher investment, as measured by capital expenditures over sales (CES), consistent with the findings in Lang and Stulz (1994). In other regressions, we also included company size (the natural logarithm of total assets) and operational performance (net operational revenues) as these have been found to be significant in other studies. Neither of these variables was, however, statistically significant in explaining the cross-sectional variation in market valuation in this sample. We consequently dropped them from the regression specification. The inclusion of the company size proxy does not change the magnitude of the estimated coefficients in a significant fashion, suggesting that excess valuation is not associated with economies of scale. Country dummies are also jointly insignificant, as expected.

As a robustness check, we test whether these results are sensitive to the 10% cut-off in voting rights. We use the 20% cut-off (panel B) and find that the magnitude of the coefficients increases somewhat, but that none of the coefficients loses its statistical significance. Comparing with Panel A, the voting rights variable becomes significantly negative at the 5% level. Therefore, our findings do not depend on the particular cut-off chosen for voting rights; the higher coefficients actually suggest that expropriation is more of an issue at higher levels of control.

Although consistent with the expropriation hypothesis, the findings so far do not shed light on whether a particular type of owner, and not the separation of ownership and control per se, is responsible for the results. We therefore study separately the effects of ownership by families, financial institutions, corporations and the state on market valuation. We use a similar regression as before and consider the effects of cash-flow and voting rights again separately, and as a ratio.

As East Asian corporations are often characterized as family controlled, we start with investigating whether families are a major factor behind our finding of expropriation for those corporations where families are the largest control block-holder. The number of corporations for which family is the largest block-holder is 1,138, or about half of the sample. We find that the effect of family ownership concentration is qualitative very similar to those found for all classes of ownership combined, although the statistical significance is diminished (Table 6). As before, we find weak evidence of a positive impact of cash-flow rights, and strong evidence of negative impacts on EXV of voting rights and the separation of cash-flow and voting rights. The higher coefficients on VOTES and CASH/VOTES than for all ownership classes combined suggest that expropriation may be a more serious issue for family controlled corporations.

We next study ownership by financial institutions. We find that cash-flow ownership by financial institutions is positively associated with corporate valuation, and that the separation of ownership and control brings about a valuation discount. Control alone does not appear to lead to lower market valuation as the coefficient on VOTES is not significant. For corporate ownership, we find, albeit somewhat weaker, evidence to suggest that corporations, in their role as large shareholders, also generally use the separation of ownership and control to expropriate minority shareholders. Control alone again does not appear to lead to lower market valuation, as the coefficient on VOTES is not significant, and cash-flow rights are not positively and significantly related to market values. The association between state ownership and market valuation is, however, insignificant regardless of whether cash-flow or voting rights, or the ratio between the two are used as independent variables. The lack of significance of the state ownership variable suggests that two types of expropriation might be going on. The state might be expropriating some value from public shareholders, but might also be expropriating value from the taxpayers (the ultimate parent).

## VI. Country-Effects

To investigate differences across countries, and as a robustness check, we study the effects of cash-flow and voting rights on market valuation by each country individually. Since the Japanese sample accounts for a large portion of the data set and Japanese ownership structures are quite different from that in the other East Asian countries, we investigate separately the effects of different types of owners in Japan on market valuation. Since there are only 14

companies with significant state ownership in the Japanese sample, and since none of them have a separation of control from ownership, we exclude this ownership category from the analysis.

Overall, higher concentration of cash-flow rights in Japan is associated with higher market valuation, and the separation of ownership and control is associated with a value discount (Table 7). The results appear driven by ownership and control of financial institutions, where we find a positive effect of cash-flow rights and a strong positive effect of the ratio of cash-flow to voting rights. In contrast, none of the coefficients for family or corporate ownership regressions are statistically significant. These findings support the results of Kang and Stulz (1998), who show that Japanese firms whose debt had a high fraction of bank loans in 1989 performed worse from 1990 to 1993, possibly as Japanese financial institutions extract a rent from their borrowers; and the findings of Morck and Nakamura (1999), who document that Japanese financial institutions do not provide good corporate governance.

The results for the other countries show that the expropriation hypothesis is not supported for the Malaysia, Singapore, and Taiwan samples, where none of the coefficients on the separation of voting from cash-flow rights are statistically significant (Table 8). The results for Korea are significant for the cash-flow over voting rights variable, but not otherwise. For the Hong Kong sample, we find statistically significant results for the voting rights and the cash-flow over voting rights variables. In case of the Indonesian, Philippine, and Thai samples, the coefficients for the cash-flow over voting rights variables are very large and significant, 1.5305, 1,4215 and 1.5562 respectively, suggesting a high degree of expropriation. This may be due to the large role of families in ownership and, in Indonesia and the Philippines, the relatively large separation between cash-flow rights and voting rights.

## VII. Conclusions

This paper documents the relation between concentration of ownership and control and their separation, on the one hand, and market valuation, on the other hand. We find that higher cash-flow rights are associated with higher market valuation, but higher voting rights with lower market valuation. The separation of control from ownership is associated with lower market values, which we interpret as evidence of expropriation of minority shareholders by controlling shareholders. Studying individual ownership classes, we conclude that family control is an important factor behind the negative relation between control rights and market valuation. In contrast, we find no evidence of expropriation for state control and control by widely-held corporations. In Japan separation of cash-flow and voting rights in the hands of financial institutions lowers market valuation. The results on expropriation are the strongest for the Indonesian, Philippine, and Thai samples. We conclude that the risk of expropriation is the major principal-agent problem for large publicly-traded corporations, as suggested by La Porta et al. (1998), Bebchuk (1999), and Morck et al. (1999).

It is likely that the degree to which certain ownership structures are associated with expropriation depends on country-specific circumstances. These may include the quality of banking systems, the legal and judicial protection of individual shareholders, and the degree of financial disclosure required. The exact magnitude to which these institutional variables affect the degree of expropriation is an issue of important policy relevance and of potential future research.

Several interesting questions merit further investigation. First, what ways to restrict the separation of ownership and control are most effective in balancing the effects of improved monitoring, as a result of ownership concentration, with the risks of expropriation? Second, the fact that expropriation exists leaves unanswered the question why minority shareholders invest in companies if they fear expropriation. One answer could be that these shareholders face limited investment opportunities. While they may fear expropriation, other investment alternatives do not yield higher risk-adjusted returns. A financially repressed financial system, for example, with low bank deposit rates and limited capital account convertibility might well mean that the net returns on stocks are still attractive, even though there is (widespread) expropriation. These and other issues are left unexplored here.

**References**


Aganin, Alexander, and Paolo Volpin, 1998, "On the Origin and Evolution of Pyramidal Groups: An Empirical Evaluation," Harvard University, mimeo.

Aoki, Masahiko, 1990, "Toward an Economic Model of the Japanese Firm, "*Journal of Economic Literature*, 28: 1-27.

Asian Company Handbook. 1998. *Toyo Keizai Shinposha,* Tokyo, Japan, Winter Edition.

Barclay, Michael and Clifford Holderness, 1989, "Private Benefits from Control of Public Corporations," *Journal of Financial Economics*, 25: 371-95.

Bebchuk, Lucian, 1999, "A Rent-Protection Theory of Corporate Control and Ownership," NBER working paper 7203, National Bureau of Economic Research, Cambridge, MA, July.

Becht, Marco, and Ariane Chapelle, 1999, "Ownership and Control in Belgium," Solvay Business School, Brussels, mimeo.

Bergstrom, Clas and Kristian Rydqvist, 1990, "Ownership of Equity in Dual-Class Firms," *Journal of Banking and Finance*, 14: 255-269.

Berle, Adolf and Gardiner Means, 1932, *The Modern Corporation and Private Property*, New York, MacMillan.

Berger, Philip G. and Eli Ofek, 1995, "Diversification's Effect on Firm Value," *Journal of Financial Economics*, 37, 39-65.

Bloch, Laurence, and Elizabeth Kremp, 1999, "Ownership and Control in France," INSEAD Business School, mimeo.

Burkart, Mike, Denis Gromb, and Fausto Panunzi, 1997, "Large Shareholders, Monitoring, and the Value of the Firm," *Quarterly Journal of Economics*, 112: 693-728.

Burkart, Mike, Denis Gromb, and Fausto Panunzi, 1998, "Why High Takeover Premia Protect Minority Shareholders," *Journal of Political Economy*, 106, 1: 172-204.

Campbell, John, 1996, "Understanding Risk and Return", *Journal of Political Economy*, 104: 298-345.

Claessens, Stijn, Simeon Djankov, and Larry Lang, 2000, "The Separation of Ownership and Control in East Asian Corporations", *Journal of Financial Economics*, forthcoming.

Claessens, Stijn, Simeon Djankov, Joseph Fan, and Larry Lang, 1999, "The Costs and Benefits of Internal Markets: Evidence from the East Asian Crisis", World Bank, mimeo.

DeAngelo, Harry, and Linda DeAngelo, 1985, "Managerial Ownership of Voting Rights: A Study of Public Corporations with Dual Classes of Common Stock," *Journal of Financial Economics*, 14, 1: 33-69.

De Jong, Abe, Rezaul Kabir, Teye Marra, and Ailsa Roell, 1999, "Ownership and Control in the Netherlands," Tilburg University, mimeo.

Demsetz, Harold, 1983, "Corporate Control, Insider Trading, and Rates of Return," *American Economic Review*, 86: 313-316.

Demsetz, Harold and Kenneth Lehn, 1985, "The Structure of Ownership: Causes and Consequences," *Journal of Political Economy*, 93: 1155-77.

Enriques, Luca, 1998, "Pyramid Groups, Intra-Group Operations, and the Separation between Ownership and Control in Italy," forthcoming in *Giurizpridenzia Commerciali.*

Grossman, Sanford, and Oliver Hart, 1988, "One-Share, One-Vote, and the Market for Corporate Control," *Journal of Financial Economics*, 20, 175-202.

Gugler, Klaus, Alex Stomper, and Josef Zechner, 1999, "The Separation of Ownership and Control: An Austrian Perspective," University of Vienna, mimeo.

Harris, Milton and Artur Raviv, 1988, "Corporate Governance: Voting Rights and Majority Rules," *Journal of Financial Economics*, 20: 203-235.

Holderness, C. and D. Sheehan, 1988, "The role of majority shareholders in publicly held companies," *Journal of Financial Economics*, 20: 317-346.

Horner, M., 1988, "The Value of The Corporate Voting Right," *Journal of Banking and Finance*, 12: 69-83.

Hoshi, Takeo, David Scharfstein, and Anil Hashyap, 1991, "The Role of Banks in Reducing the Cost of Financial Distress in Japan", *Journal of Financial Economics* 27: 125-160.

Japan Company Handbook. 1998. *Toyo Keizai Shanposha,* Tokyo, Japan, Winter Edition.

Jensen, Michael, and William Meckling, 1976, "Theory of the Firm: Managerial Behavior, Agency Costs, and Ownership Structure," *Journal of Financial Economics*, 11: 5-50.

Kang, Jun-Koo and Rene Stulz, 1998, "Do Banking Shocks Affect Borrowing Firm Performance? An Analysis of the Japanese Experience," Ohio State University, mimeo.

Kaplan, Steven, 1994, "Top Executive Rewards and Firm Performance: A Comparison of Japan and the United States," *Journal of Political Economy*, 102: 510-546.

La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert W. Vishny, 1998, "Law and Finance," *Journal of Political Economy*, 106, 4: 1113-1155.

La Porta, Rafael, Florencio Lopez-de-Silanes, and Andrei Shleifer, 1999a, "Corporate Ownership around the World," *Journal of Finance*, 54, 2: 471-518.

La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert W. Vishny, 1999b, "Investor Protection and Corporate Valuation," Harvard University, mimeo.

La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert W. Vishny, 2000, "Investor Protection: Origin, Consequences, Reform," *Journal of Financial Economics*, forthcoming.

Lang, Larry H.P. and René M. Stulz, 1994, "Tobin's q, Corporate Diversification, and Firm Performance," *Journal of Political Economy*, 102: 1248-1280.

Lease, Ronald, McConnell, John, and Wayne Mikkelson, 1984, "The Market Value of Differential Voting Rights in Closely held Corporations," *Journal of Business*, 57, 4: 443-467.

Levy, Haim, 1982, "Economic Valuation of Voting Power of Common Stock," *Journal of Finance*, 38, 2: 79-93.

Lins, K. and H. Servaes, 1999, "International Evidence on the Value of Corporate Diversification" *Journal of Finance*, forthcoming.

Malitz, Ileen, 1989, "A Re-Examination of the Wealth Expropriation Hypothesis: The Case of Captive Finance Subsidiaries," *Journal of Finance*, 46: 1039-1047.

McConnell, John and Henri Servaes, 1990, "Additional Evidence on Equity Ownership and Corporate Value," *Journal of Financial Economics*, 27: 595-612.

Megginson, William, 1990, "Restricted Voting Stock, Acquisition Premiums, and the Market Value of Corporate Control," *The Financial Review*, 25: 175-198.

Morck, Randall, Andrei Shleifer, and Robert Vishny, 1988, "Management Ownership and Market Valuation: An Empirical Analysis," *Journal of Financial Economics*, 20: 293-315.

Morck, Randall, David Stangeland, and Bernard Yeung, 1999, "Inherited Wealth, Corporate Control and Economic Growth," University of Alberta, mimeo.

Morck, Randall, and Masao Nakamura, 1999, "Banks and Corporate Control in Japan," *Journal of Finance*, 54, 1: 319-339.

Nenova, Tatiana, 1999, "The Value of a Corporate Vote and Private Benefits: Cross-Country Analysis," Working paper, Harvard University.

Prowse, Stephen, 1992, "The Structure of Corporate Ownership in Japan," *Journal of Finance*, 47: 1121-1140.

Robinson, C, and A. White, 1990, "The Value of a Vote in the Market for Corporate Control, " York University, mimeo.

Shleifer, Andrei, and Lawrence Summers, 1988, "Breach of Trust in Hostile Takeovers," in *Corporate Takeovers: Causes and Consequences*, Alan Auerbach, (ed.), National Bureau of Economic Research, Chicago and London, University of Chicago Press.

Shleifer, Andrei and Robert Vishny, 1986, "Large Shareholders and Corporate Control," *Journal of Political Economy*, 94: 461-488.

Shleifer, Andrei and Robert Vishny, 1997. "A survey of corporate governance," *Journal of Finance*, 52: 737-783.

Slovin, Myron, and Marie Sushka, 1997, "The Implications of Equity Issuance Decisions within a Parent-Subsidiary Governance Structures," *Journal of Finance*, 52: 841-857.

Weinstein, David and Yishay Yafeh, 1998, "On the Costs of a Bank-Centered Financial System," *Journal of Finance*, 53: 635-672.

Wolfenzon, Daniel, 1999, "A Theory of Pyramidal Structures," Harvard University, mimeo, February.

Zingales, Luigi, 1994, "The Value of the Voting Right: A Study of the Milan Stock Exchange Experience," *Review of Financial Studies*, 7, 1: 125-148.

Zingales, Luigi, 1995, "What Determines the Value of Corporate Votes?," *Quarterly Journal of Economics*, 110, 4: 1047-1073.

**Table 1: Cross-Holdings among the Main Companies in the Fuyo Group**
(in percentage)

This table shows the cross-holdings among the main members of the Fuyo group, the fourth largest keiretsu in Japan. The rows show ownership and control in the respective column entries. Cash-flow rights are denoted with "C" and voting rights are denoted with "V." For example, Fuji Bank has C&V 4.9% in Oki Electric, C&V 16.8% in Yasuda Trust Bank, etc. Marubeni Corporation has C&V 0.4% in Fuji Bank, C&V 0.3% in Oki Electric, C&V 2.4% in Yasuda Trust Bank, etc.

| **Owner/Recipient** | **Fuji Bank** | **Oki Electric** | **Yasuda Trust Bank** | **Marubeni Corp.** | **Yasuda Fire and Marine** | **Nippon Seiko** | **Nihon Cement** | **Showa Denko** | **Nippon Kokkan** |
|---|---|---|---|---|---|---|---|---|---|
| Fuji Bank | -- | C&V 4.9 | C&V 16.8 | C&V 4.7 | C&V 5.0 | C&V 4.1 | C&V 4.8 | C 4.1; V 5.3 | -- |
| Oki Electric | C&V 7.5 | -- | C&V 3.4 | C&V 0.8 | C&V 2.6 | C&V 0.9 | C&V 1.0 | C&V 1.1 | -- |
| Yasuda Trust Bank | C&V 2.8 | C&V 4.9 | -- | C&V 5.1 | C&V 4.9 | C&V 7.2 | C&V 2.9 | C&V 2.3 | -- |
| Marubeni Corp. | C&V 0.4 | C&V 0.3 | C&V 2.4 | -- | C&V 6.0 | -- | -- | -- | C&V 1.7 |
| Yasuda F&M | C&V 1.2 | C&V 7.0 | C&V 2.2 | C&V 3.9 | -- | C&V 6.2 | C&V 2.1 | C&V 5.1 | C&V 2.3 |
| Nippon Seiko | C&V 1.1 | C&V 0.6 | C&V 1.1 | C&V 0.3 | -- | -- | -- | -- | C&V 1.9 |
| Nihon Cement | C&V 1.5 | C&V 1.1 | C&V 1.4 | C&V 0.2 | C&V 0.9 | -- | -- | C&V 0.9 | C&V 1.4 |
| Showa Denko | C&V 1.0 | -- | -- | C&V 0.4 | C&V 0.6 | -- | C&V 0.9 | -- | C&V 1.1 |
| Nippon Kokkan | -- | C&V 1.0 | C&V 1.0 | -- | -- | C&V 1.2 | C&V 0.7 | C&V 0.7 | -- |
| **Yasuda Life Insurance** | **C&V 4.4** | **C&V 7.5** | **C&V 8.6** | **C 4.7; V 6.5** | **C&V 4.2** | **C&V 4.4** | **C&V 5.2** | **C 4.8; V 5.6** | **C&V 5.1** |

**Table 2: Control of Publicly-Traded Companies in East Asia**
(percentage of the total number of companies in the sample)

Newly-assembled data for 2,980 publicly-traded corporations (including both financial institutions and non-financial institutions) are based on Worldscope, supplemented with information from the Asian Company Handbook 1999 (1998), the Japan Company Handbook 1999 (1998), the Securities Exchange of Thailand Companies Handbook (1998), and the Singapore Investment Guide (1998). In all cases, we collect the ownership structure as of December 1996 or the end of the 1996 fiscal year.

| Country | Number of Corporations in Sample | Share of Firms under Ultimate Control | Of which | | | |
|---|---|---|---|---|---|---|
| | | | Family | State | Widely Held Financial | Widely Held Corporation |
| 10% cut-off for voting rights of the largest shareholder | | | | | | |
| Hong Kong | 330 | 99.4 | 64.7 | 3.7 | 7.1 | 23.9 |
| Indonesia | 178 | 99.4 | 68.6 | 10.2 | 3.8 | 16.8 |
| Japan | 1240 | 58.0 | 13.1 | 1.1 | 38.5 | 5.3 |
| Korea | 345 | 85.7 | 67.9 | 5.1 | 3.5 | 9.2 |
| Malaysia | 238 | 99.0 | 57.5 | 18.2 | 12.1 | 11.2 |
| Philippines | 120 | 98.4 | 42.1 | 3.6 | 16.8 | 35.9 |
| Singapore | 221 | 98.6 | 52.0 | 23.6 | 10.8 | 12.2 |
| Taiwan | 141 | 97.1 | 65.6 | 3.0 | 10.4 | 18.1 |
| Thailand | 167 | 97.9 | 56.5 | 7.5 | 12.8 | 21.1 |
| 20% cut-off for voting rights of the largest shareholder | | | | | | |
| Hong Kong | 330 | 93.1 | 66.7 | 1.4 | 5.2 | 19.8 |
| Indonesia | 178 | 94.9 | 71.5 | 8.2 | 2.0 | 13.2 |
| Japan | 1240 | 20.2 | 9.7 | 0.8 | 6.5 | 3.2 |
| Korea | 345 | 56.8 | 48.4 | 1.6 | 0.7 | 6.1 |
| Malaysia | 238 | 89.6 | 67.2 | 13.4 | 2.3 | 6.7 |
| Philippines | 120 | 80.9 | 44.6 | 2.1 | 7.5 | 26.7 |
| Singapore | 221 | 94.5 | 55.4 | 23.5 | 4.1 | 11.5 |
| Taiwan | 141 | 73.7 | 48.2 | 2.8 | 5.3 | 17.4 |
| Thailand | 167 | 93.5 | 61.6 | 8.0 | 8.6 | 15.3 |

**Table 3: Separation of Cash-Flow and Voting Rights in East Asian Corporations** (Largest Control Holder)

The newly-assembled data for 2,980 publicly-traded corporations (including both financial institutions and non-financial institutions) are collected from Worldscope, the Asian Company Handbook, the Japan Company Handbook, the Securities Exchange of Thailand Companies Handbook (1998), the Singapore Investment Guide (1998). In all cases, the data are as of December 1996 or the end of the 1996 fiscal year. A company needs to have an ultimate controlling owner to be included in this table.

Panel A: Companies With an Investor Who Holds at Least 10% of Voting Rights

| Country | Number of Corporations | Number of Corporations Where Voting Exceed Cash-Flow Rights | Cash-Flow Rights | | | Voting Rights | | | Ratio of Cash-Flow to Voting Rights | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Mean | Standard Deviation | Median | Mean | Standard Deviation | Median | Mean | Standard Deviation | Median |
| Hong Kong | 327 | 89 | 27.519 | 11.878 | 26.000 | 31.834 | 11.335 | 29.000 | 0.873 | 0.225 | 1.000 |
| Indonesia | 177 | 108 | 27.712 | 13.264 | 26.000 | 36.669 | 11.692 | 36.000 | 0.758 | 0.248 | 0.809 |
| Japan | 706 | 454 | 10.843 | 10.608 | 8.000 | 15.801 | 8.624 | 12.000 | 0.606 | 0.350 | 0.600 |
| Korea | 293 | 80 | 20.839 | 9.533 | 20.000 | 23.942 | 9.334 | 23.000 | 0.882 | 0.216 | 1.000 |
| Malaysia | 237 | 94 | 26.245 | 12.289 | 24.000 | 31.633 | 11.110 | 32.000 | 0.831 | 0.232 | 1.000 |
| Philippines | 117 | 40 | 25.068 | 12.202 | 23.000 | 27.894 | 11.354 | 25.000 | 0.892 | 0.197 | 1.000 |
| Singapore | 215 | 150 | 23.009 | 11.492 | 22.000 | 30.395 | 10.364 | 31.000 | 0.742 | 0.221 | 0.750 |
| Taiwan | 135 | 61 | 20.215 | 10.335 | 21.000 | 24.335 | 9.612 | 23.000 | 0.815 | 0.225 | 1.000 |
| Thailand | 164 | 25 | 36.577 | 13.294 | 36.000 | 39.042 | 12.779 | 42.000 | 0.941 | 0.161 | 1.000 |
| East Asia | 2,371 | 1,101 | 21.296 | 13.794 | 20.000 | 26.173 | 12.928 | 24.000 | 0.773 | 0.291 | 1.000 |

Panel B: Companies With an Investor Who Holds at Least 20% of Voting Rights

| Country | Number of Corporations | Number of Corporations Where Voting Exceed Cash-Flow Rights | Cash-Flow Rights | | | Voting Rights | | | Ratio of Cash-Flow to Voting Rights | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Mean | Standard Deviation | Median | Mean | Standard Deviation | Median | Mean | Standard Deviation | Median |
| Hong Kong | 303 | 88 | 28.554 | 11.711 | 26.000 | 33.194 | 10.634 | 31.000 | 0.864 | 0.231 | 1.000 |
| Indonesia | 166 | 107 | 28.698 | 13.077 | 26.000 | 38.195 | 10.383 | 41.000 | 0.747 | 0.244 | 0.781 |
| Japan | 238 | 84 | 21.293 | 11.912 | 20.000 | 25.356 | 8.771 | 20.000 | 0.814 | 0.301 | 1.000 |
| Korea | 195 | 64 | 24.738 | 9.251 | 24.000 | 28.907 | 7.360 | 26.000 | 0.857 | 0.229 | 1.000 |
| Malaysia | 212 | 89 | 27.797 | 12.051 | 26.000 | 33.737 | 9.784 | 32.000 | 0.817 | 0.238 | 1.000 |
| Philippines | 94 | 36 | 28.181 | 11.604 | 25.000 | 31.524 | 9.594 | 31.000 | 0.879 | 0.208 | 1.000 |
| Singapore | 195 | 137 | 24.369 | 11.162 | 22.000 | 32.143 | 9.214 | 32.000 | 0.743 | 0.220 | 0.750 |
| Taiwan | 98 | 45 | 23.888 | 9.528 | 23.500 | 28.551 | 7.846 | 25.500 | 0.829 | 0.203 | 1.000 |
| Thailand | 153 | 24 | 38.264 | 12.095 | 36.300 | 40.874 | 11.154 | 42.000 | 0.942 | 0.164 | 1.000 |
| East Asia | 1,654 | 674 | 27.084 | 12.302 | 25.000 | 32.348 | 10.541 | 31.000 | 0.829 | 0.241 | 1.000 |

## Table 4: Construction of the Valuation Measure

Panel A reports basic statistics of Amsteel Corporation and the Malaysian steel industry. Total capitalization is the market value of common equity plus the book value of debt. The market to sales (MTS) ratio is total capitalization divided by total sales. The imputed capitalization is the firm's total sales multiplied by its imputed MTS ratio. The calculation of the imputed MTS ratio is illustrated in Panel B.

Panel A: Industry-adjusted performance of Amsteel Corporation

| | |
|---|---|
| Total capitalization of Amsteel Corporation (US$ million) | 3,120 |
| Total sales of Amsteel Corporation (US$ million) | 1,929 |
| Market-to-sales ratio of Amsteel Corporation | 1.62 |
| Median MTS ratio of steel producing firms in Malaysia (4 single-segment and 5 multi-segment firms) | 1.68 |
| Conventional industry adjusted value of Amsteel (MTS ratio of Amsteel / Median MTS ratio of steel firms) | **0.96** |
| MTS ratio of Amsteel imputed from single-segment comparables (See Panel B) | 2.50 |
| Imputed capitalization of Amsteel (Imputed MTS ratio*Total sales; US$ million) | 4,823 |
| Excess value, EXV, of Amsteel (Actual capitalization / imputed capitalization) | **0.65** |

Panel B: Imputing Amsteel's market to sales ratio from single-segment peers

| Segment Name | SIC code | Segment Sales US$ million | Fraction of Total Sales | Single-segment peers 2-digit SIC industry | | Broad industry group (Campbell, 1996) | | Imputed MTS of Amsteel's segments |
|---|---|---|---|---|---|---|---|---|
| | | | | Number of firms | Median MTS | Number of firms | Median MTS | |
| | | | | | | | | |
| Steel | 33 | 462 | 0.24 | 4 | 2.35 | 9 | 3.03 | 2.35 |
| Retail & Distribution | 54 | 445 | 0.23 | 0 | N.A. | 8 | 2.51 | 2.51 |
| Motors | 55 | 442 | 0.23 | 0 | N.A. | 5 | 1.65 | 1.65 |
| Food & Agricultural | 20 | 236 | 0.12 | 5 | 2.20 | 8 | 2.51 | 2.20 |
| Computers | 35 | 215 | 0.11 | 1 | N.A. | 6 | 3.35 | 3.35 |
| Property | 67 | 129 | 0.07 | 1 | N.A. | 22 | 4.96 | 4.96 |
| | | | | | | | | |
| Firm-level value | | 1,929 | 1.00 | | | | | **2.50** |

## Table 5: Cash-Flow Rights, Voting Rights, and Firm Value

This table presents the regression results for the relationship between excess valuation (EXV) and the distribution of cash-flow and control rights. The independent variables include the share of cash-flow rights held by the largest block-holder (CASH), the share of voting rights held by the largest block-holder (VOTES), and the ratio of cash flow to voting rights (CASH/VOTES). Total capital expenditures over sales (CES) is included as a control variable. The regressions are performed on the full sample using the ordinary least-square method. All data are for 1996. Companies which do not have a block-holder with at least 10% of the vote or which do not report capital expenditures are excluded from Panel A. Companies which do not have a block-holder with at least 20% of the vote or which do not report capital expenditures or stock prices are excluded from Panel B. Absolute values of t-statistics are reported under the coefficients.

Panel A

| Explanatory Variable | EXV | EXV | EXV |
|---|---|---|---|
| Intercept | 1.0764** | 1.2492** | 0.8969** |
| | 33.0421 | 30.2411 | 19.5351 |
| CASH | 0.4984** | | |
| | 3.9541 | | |
| VOTES | | -0.2116 | -0.6057** |
| | | 1.5829 | 4.4554 |
| CASH/VOTES | | | 0.5991** |
| | | | 10.9074 |
| CES | 0.1299** | 0.1982** | 0.1705** |
| | 3.5080 | 5.2278 | 4.6792 |
| Number of Observations | 2,098 | 2,098 | 2,098 |
| Adjusted $R^2$ | 0.0142 | 0.0121 | 0.0539 |

Panel B

| Explanatory Variable | EXV | EXV | EXV |
|---|---|---|---|
| Intercept | 0.9921** | 1.3216** | 0.8097** |
| | 19.2888 | 18.1718 | 9.1595 |
| CASH | 0.6843** | | |
| | 3.9660 | | |
| VOTES | | -0.4236* | -0.6007** |
| | | 2.0733 | 3.0425 |
| CASH/VOTES | | | 0.7004** |
| | | | 9.3876 |
| CES | 0.0859 | 0.1578** | 0.1673** |
| | 1.6399 | 2.9303 | 3.2077 |
| Number of Observations | 1,465 | 1,465 | 1,465 |
| Adjusted $R^2$ | 0.0117 | 0.0042 | 0.0474 |

· and ** represent significance at the 5 and 1 percent level respectively.

## Table 6: Cash-Flow and Voting Rights, and Expropriation
(By Ownership Types)

This table presents the regression results of the relationship between excess valuation (EXV) and the concentration of cash-flow and control rights. The independent variables include the share of cash-flow rights held by the largest block-holder (CASH), the share of voting rights held by the largest block-holder (VOTES), and the ratio of cash flow to voting rights (CASH/VOTES). Total capital expenditures over sales (CES) is included as a control variable. The regressions are performed on the sample using the ordinary least-square method. All data are for 1996. Companies which do not have a block-holder with at least 10% of the vote or which do not report capital expenditures are excluded. Absolute values of t-statistics are reported under the coefficients.

| Explanatory Variable | Family Ownership | | | Financial Institutions | | | Corporations | | | The State or Municipality | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | EXV | EXV | EXV | EXV | EXV | EXV | EXV | EXV | EXV | EXV | EXV | EXV |
| Intercept | 0.9888** | 1.4892** | 0.8424** | 0.7537 | 1.2465** | 0.7222* | 1.3319** | 1.4582** | 0.8414* | 1.2976** | 1.3412** | 1.3933* |
| | 9.0954 | 13.1812 | 5.9037 | 1.8722 | 3.3633 | 1.9717 | 5.1208 | 5.4718 | 2.3561 | 2.8699 | 2.9468 | 2.2942 |
| CASH | 0.3316 | | | 0.0161** | | | 0.0462 | | | 0.8062 | | |
| | 1.6119 | | | 3.9909 | | | 0.0951 | | | 1.5089 | | |
| VOTES | | -0.9362** | -0.8222** | | -0.2375 | -0.6564 | | -0.3066 | -0.4239 | | 0.7017 | 0.6988 |
| | | 4.7493 | 4.2656 | | 0.5534 | 1.5382 | | 0.6006 | 0.8184 | | 1.2889 | 1.2857 |
| CASH/VOTES | | | 0.6627** | | | 0.6358** | | | 0.6588* | | | -0.0509 |
| | | | 6.8068 | | | 7.0984 | | | 2.4444 | | | 0.1215 |
| CES | 0.0024* | 0.0024* | 0.0024* | 0.0016** | 0.0015** | 0.0015** | 0.0004 | 0.0004 | -0.0002 | 0.0007 | 0.0007 | 0.0008 |
| | 2.4465 | 2.4352 | 2.4114 | 3.1889 | 2.8996 | 3.0089 | 0.2782 | 0.3426 | 0.0058 | 0.4216 | 0.4401 | 0.4433 |
| Observations | 1,138 | 1,138 | 1,138 | 521 | 521 | 521 | 262 | 262 | 262 | 169 | 169 | 169 |
| Adjusted $R^2$ | 0.0032 | 0.0158 | 0.0505 | 0.0629 | 0.0411 | 0.1127 | 0.0067 | 0.0051 | 0.0029 | 0.0352 | 0.0328 | 0.0267 |

* and ** represent significance at the 5 and 1 percent level respectively.

## Table 7: Cash-Flow and Voting Rights, and Expropriation in Japan
(By Ownership Types)

This table presents the regression results of the relationship between excess valuation (EXV) and the concentration of cash-flow and control rights. The independent variables include the share of cash-flow rights held by the largest block-holder (CASH), the share of voting rights held by the largest block-holder (VOTES), and the ratio of cash flow to voting rights (CASH/VOTES). Total capital expenditures over sales (CES) is used as a control variable. The regressions are performed on the sample using the ordinary least-square method. All data are for 1996. Companies which do not have a block-holder with at least 10% of the vote or which do not report capital expenditures or stock returns are excluded. State ownership is also excluded as a category as only 14 firms are controlled by the state and none of them has a separation of cash-flow and control rights. Absolute values of t-statistics are reported under the coefficients.

| Explanatory Variable | Full Sample | | | Family Ownership | | | Financial Institutions | | | Corporations | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | EXV | EXV | EXV | EXV | EXV | EXV | EXV | EXV | EXV | EXV | EXV | EXV |
| Intercept | 1.0182** | 1.1402** | 0.9876** | 1.4368** | 1.4754** | 0.9563** | 0.9615** | 1.1365** | 0.9418** | 1.1472** | 1.2074** | 0.8425 |
| | 8.3614 | 10.2407 | 9.5640 | 8.7506 | 8.8163 | 3.4344 | 11.8883 | 8.0502 | 12.1106 | 6.1025 | 6.0641 | 1.6641 |
| CASH | 0.7005** | | | -0.7250 | | | 0.0287** | | | -0.1791 | | |
| | 2.5193 | | | 1.0484 | | | 5.6234 | | | 0.2716 | | |
| VOTES | | 0.4523 | -0.8465* | | -0.9086 | -0.9123 | | -0.1882 | -0.7547 | | -0.3909 | -0.4874 |
| | | 0.1358 | 2.3789 | | 1.3295 | 1.3386 | | 0.3438 | 1.4666 | | 0.5472 | 0.6572 |
| CASH/VOTES | | | 0.5023** | | | 0.5368 | | | 0.6344** | | | 0.3949 |
| | | | 7.0194 | | | 1.8671 | | | 7.1409 | | | 0.8096 |
| CES | 0.1722** | 0.1577** | 0.1636** | 0.2163 | 0.2102 | 0.2138 | 0.1924** | 0.1777** | 0.1720** | 0.2076 | 0.2012 | -0.0512 |
| | 3.4910 | 3.1855 | 3.4325 | 1.5391 | 1.4959 | 1.5189 | 3.7007 | 3.3106 | 3.3886 | 0.0548 | 0.0256 | 0.2454 |
| Observations | 654 | 654 | 654 | 136 | 136 | 136 | 456 | 456 | 456 | 40 | 40 | 40 |
| Adjusted $R^2$ | 0.0254 | 0.0124 | 0.0765 | 0.0161 | 0.0202 | 0.0204 | 0.0722 | 0.0193 | 0.1091 | -0.0517 | 0.0092 | -0.0564 |

* and ** represent significance at the 5 and 1 percent level respectively.

## Table 8: Cash-Flow and Voting Rights, and Expropriation (By Country)

The dependent variable is excess valuation (EXV), the independent variables include the share of cash-flow rights (CASH), the share of voting rights (VOTES), the ratio of cash flow to voting rights (CASH/VOTES), a control variable for total capital expenditures over sales (CES). The regressions are performed using the ordinary least-square method. All data are for 1996 and companies where the largest block-holder has less than 10% of voting rights are excluded. Absolute values of t-statistics are reported.

| Explanatory Variable | Hong Kong | | | Indonesia | | | Korea | | | Malaysia | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | EXV | EXV | EXV | EXV | EXV | EXV | EXV | EXV | EXV | EXV | EXV | EXV |
| Intercept | 1.3416** | 1.7123** | 1.2994** | 0.6361** | 1.2465** | 0.6577 | 1.0353** | 1.3204** | 0.8185** | 0.8713** | 0.9439** | 0.6007* |
| | 9.0044 | 10.3016 | 4.8295 | 5.8002 | 7.3475 | 0.3573 | 7.6689 | 8.5675 | 3.3018 | 6.1277 | 5.1183 | 2.2774 |
| CASH | -0.6362 | | | 1.7111** | | | 0.0102 | | | 0.6386 | | |
| | 1.3598 | | | 4.2532 | | | 1.8072 | | | 1.1938 | | |
| VOTES | | -0.0171** | -0.0162** | | -0.4629 | -0.3015 | | -0.3015 | -0.0014 | | 0.2969 | 0.3112 |
| | | 3.6980 | 3.5099 | | 1.0573 | 0.7336 | | 0.5792 | 0.0235 | | 0.5089 | 0.5384 |
| CASH/VOTES | | | 0.4332* | | | 1.5305** | | | 0.5133** | | | 0.4050 |
| | | | 2.1506 | | | 8.3786 | | | 2.5851 | | | 1.7051 |
| CES | 0.4249* | 0.7338* | 0.7903* | 0.4353 | 0.6319 | 0.3997 | 0.1876 | 0.2218 | 0.2002 | 0.6750** | 0.6810** | 0.6745** |
| | 2.0568 | 2.1414 | 2.2568 | 1.4691 | 1.9583 | 1.3608 | 1.6896 | 1.9617 | 1.7994 | 3.5833 | 3.6802 | 3.5404 |
| Observations | 327 | 327 | 327 | 177 | 177 | 177 | 178 | 178 | 178 | 237 | 237 | 237 |
| Adjusted $R^2$ | 0.0163 | 0.0542 | 0.0623 | 0.1008 | 0.0199 | 0.2551 | 0.0292 | 0.01309 | 0.0391 | 0.0430 | 0.0359 | 0.0432 |
| Explanatory Variable | The Philippines | | | Singapore | | | Taiwan | | | Thailand | | |
| | EXV | EXV | EXV | EXV | EXV | EXV | EXV | EXV | EXV | EXV | EXV | EXV |
| Intercept | 1.1573** | 1.4540** | 0.2950 | 1.0034** | 1.1758** | 0.8606** | 0.9178** | 0.8992** | 0.5525 | 0.8429** | 1.2895** | -0.2279 |
| | 6.9429 | 8.1103 | 1.6107 | 7.9234 | 7.4615 | 3.6534 | 5.4871 | 3.5157 | 1.9359 | 4.8175 | 6.5923 | 1.0153 |
| CASH | 0.4070 | | | 0.5042 | | | 1.4181* | | | 0.7648 | | |
| | 0.7735 | | | 1.0935 | | | 1.9946 | | | 1.7370 | | |
| VOTES | | -0.7125 | -0.9240 | | -0.1794 | -0.3675 | | 1.2390 | 0.9530 | | -0.4419 | -0.2438 |
| | | 1.4833 | 1.9320 | | 0.3870 | 0.7749 | | 1.3688 | 1.2351 | | 0.9744 | 0.5784 |
| CASH/VOTES | | | 1.4215** | | | 0.4988 | | | 0.5142 | | | 1.5562** |
| | | | 6.8753 | | | 1.7781 | | | 1.1168 | | | 9.0209 |
| CES | -0.0033 | -0.0033 | -0.0199 | 0.1190 | 0.1838 | 0.1895 | 0.7384** | 0.7132** | 0.7712* | 0.4197 | 0.4573 | 0.4022 |
| | 1.2942 | 1.3083 | 0.8204 | 0.6933 | 1.1259 | 0.8542 | 2.4639 | 2.6045 | 2.3725 | 1.5236 | 1.5435 | 1.3705 |
| Observations | 97 | 97 | 97 | 206 | 206 | 206 | 89 | 89 | 89 | 133 | 133 | 133 |
| Adjusted $R^2$ | 0.0063 | 0.0072 | 0.1444 | -0.0048 | -0.0087 | 0.0013 | 0.0821 | 0.0738 | 0.0781 | 0.0326 | 0.0219 | 0.1192 |

and ** represent significance at the 5 and 1 percent level, respectively.

**Table A1: Sources of Ownership and Control Data for East Asian Firms**

| Country | Immediate Ownership Data | Dual-Class Shares | Business Groups: Pyramids and Cross-Holdings |
|---|---|---|---|
| Hong Kong | Worldscope<br><br>Asian Company Handbook<br><br>Hong Kong Company Handbook 1997 | Datastream | Chu, Yin-Wah and Gary Hamilton, 1993, Business Networks in Hong Kong, University of California, Davis, mimeo.<br><br>Far Eastern Economic Review, 1992, Have Cash, Will Travel, March 5, Special Section on the Li ka-Shing Conglomerate<br><br>Hong Kong Company Handbook, 1998 |
| Indonesia | Worldscope<br><br>Asian Company Handbook<br><br>Handbook of Indonesian Companies 1996 | Datastream<br><br>Handbook of Indonesian Companies 1996 | Fisman, Ray, 1998, Announcement Effects of Suharto's Illnesses on Related Companies, Working paper, Harvard Business School.<br><br>W.I.Carr Banque Indosuez Group, 1997, Indonesian Group Connections, Jakarta, Indonesia<br><br>Indobusiness, 1998, 1995 Ranking of Indonesian Largest Conglomerates, available at http://indobiz.com/company/warta/conglo/htm |
| Japan | Worldscope<br><br>Japan Company Handbook | Datastream | Dodwell Marketing Consultants, 1997, Industrial Groupings in Japan the Anatomy of the "Keiretsu," 12th Edition, 1996/1997, Tokyo, Japan.<br><br>Sato, Kazuo, 1984, "The Anatomy of Japanese Businesses," M.E.Sharpe, Chapter 4. |
| Korea (South) | Worldscope<br><br>Asian Company Handbook | Datastream | Korean Fair Trade Commission, 1997, 1996 List of Largest 30 Chaebol, Seoul, Korea.<br><br>Lim, Ungki, 1998, Ownership Structure and Family Control in Korean Conglomerates: with Cases of the 30 Largest Chaebol, Seoul University, Korea. |

**Table A1 (continued)**

| Country | Immediate Ownership Data | Dual-Class Shares | Business Groups: Pyramids and Cross-Holdings |
|---|---|---|---|
| Philippines | Worldscope | Datastream | Philippine Stock Exchange, 1997, Investment Guide 1996, Manila. |
| | Asian Company Handbook | Philippine Stock Exchange Investments Guide 1997 | Tan, Edita, 1993, Interlocking Directorates, Commercial Banks, Other Financial Institutions, and Non-Bank Corporations, Philippine Review of Economics and Business, 30, 1-50. |
| | Philippine Stock Exchange Investments Guide 1997 | | |
| Singapore | Worldscope | Datastream | Singapore Stock Exchange, 1997, Singapore Company Handbook. |
| | Asian Company Handbook | Singapore Investment Guide 1997 | Hiscock, Geoff, 1998, Asia's Wealth Club, Nicholas Brealey. |
| Taiwan | Worldscope | Datastream | China Credit Information Service, 1997, Business Groups in Taiwan, 1996-1997, Taipei, Republic of China. |
| | Asian Company Handbook | | Far Eastern Economic Review, 1994, The Money Machine, August 11, for the corporate holdings of the Kuomintang. |
| Thailand | Worldscope | Datastream | Tara Siam Ltd., 1997, Thai Business Groups 1996/1997: A Unique Guide to Who Owns What, Bangkok, Thailand. |
| | Asian Company Handbook | Securities Exchange of Thailand Companies Handbook 1997 | The Nation, 1998, Thai Tycoons: Winners and Losers in the Economic Crisis, July, Special Issue. |
| | Securities Exchange of Thailand Companies Handbook 1997 | | Far Eastern Economic Review, 1997, From Chickens to Microchips: the Story of Thai Conglomerates, January 23. |

**Figure 1: The Fuyo Group (Japan)**

This figure shows the organizational structure of the Fuyo group, the fourth largest keiretsu in Japan. The principal shareholder is shown in thick-bordered box. Cash-flow rights are denoted with “C” and voting rights are denoted with “V”. Pyramidal holdings are denoted with solid lines. The numbers represent the percentage of cash-flow and voting rights. The difference between ownership and control at any given node implies that shares with superior voting rights are used. No cross-holdings are reported on this figure.

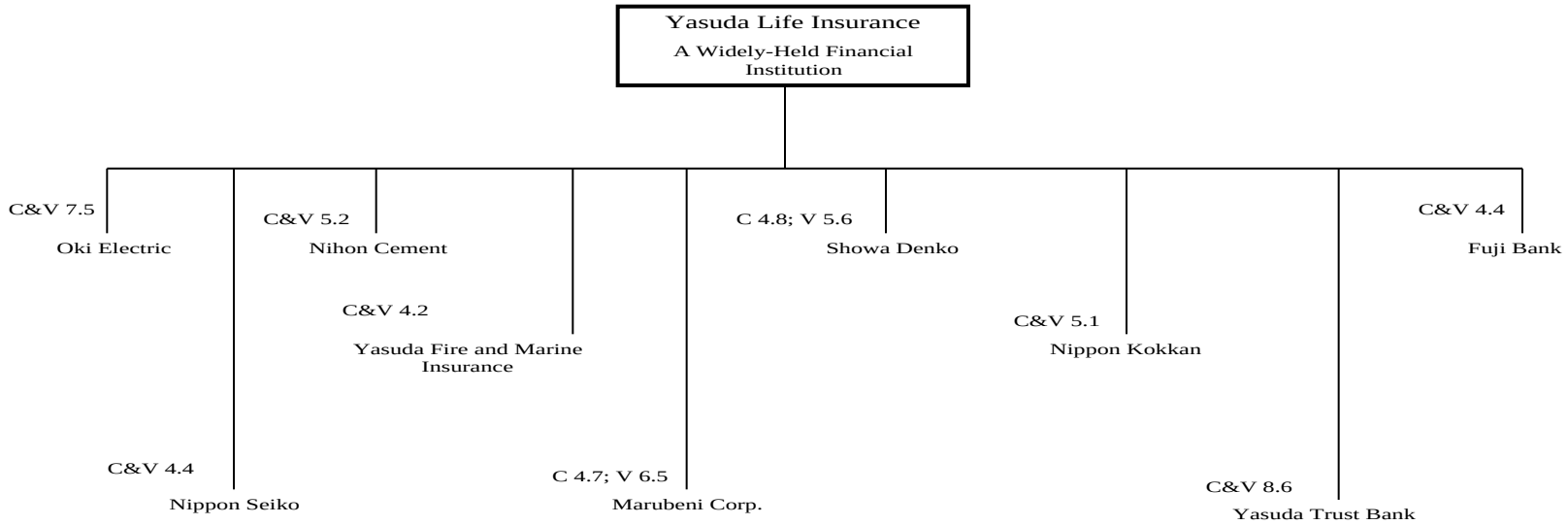
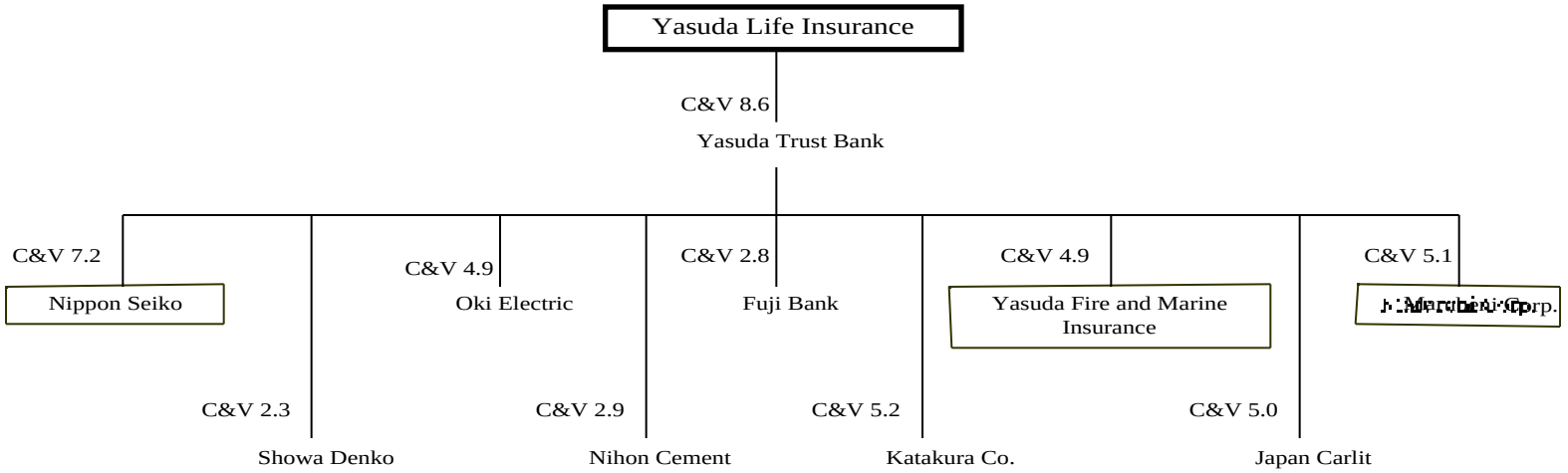


**Figure 2: Yasuda Trust Bank (Japan)**

This figure shows the organizational structure of Yasuda Trust Bank, the second largest company in the Fuyo group in terms of market capitalization. The principal shareholder chain is shown in the two thick-bordered boxes. Cash-flow rights are denoted with "C" and voting rights are denoted with "V". The numbers represent the percentage of cash-flow and voting rights. Pyramidal holdings



are denoted with solid lines. There are no cross-holdings or shares with superior voting rights being used.

**Figure 3: Fuji Bank (Japan)**

This figure shows the organizational structure of Fuji Bank, the third largest company in the Fuyo group in terms of market capitalization. The principal shareholder chain is shown in the two thick-bordered boxes. Cash-flow rights are denoted with "C" and voting rights are denoted with "V". The numbers represent the percentage of cash-flow and voting rights. Pyramidal holdings are denoted with solid lines, cross-holdings are denoted with dotted lines.