

## Disentangling the Incentive and Entrenchment Effects of Large Shareholdings

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### ABSTRACT

This article disentangles the incentive and entrenchment effects of large ownership. Using data for 1,301 publicly traded corporations in eight East Asian economies, we find that firm value increases with the cash-flow ownership of the largest shareholder, consistent with a positive incentive effect. But firm value falls when the control rights of the largest shareholder exceed its cash-flow ownership, consistent with an entrenchment effect. Given that concentrated corporate ownership is predominant in most countries, these findings have relevance for corporate governance across the world.

THE EFFECTS OF OWNERSHIP STRUCTURES on the value of firms have been researched extensively, with the role of large investors receiving special attention. Investors with large ownership stakes have strong incentives to maximize their firms' value and are able to collect information and oversee managers, and so can help overcome one of the principal-agent problems in the modern corporation—that of conflicts of interest between shareholders and managers (Jensen and Meckling (1976)). Large shareholders also have strong incentives to put pressure on managers or even to oust them through a proxy fight or a takeover. For example, Shleifer and Vishny (1997, p. 754) point

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out, "Large shareholders thus address the agency problem in that they have both a general interest in profit maximization, and enough control over the assets of the firm to have their interest respected."

Less work has been done on the costs—in terms of lower firm valuation—associated with the presence of large investors. Again, according to Shleifer and Vishny (1997, p. 758), "Large investors may represent their own interests, which need not coincide with the interests of other investors in the firm, or with the interests of employees and managers." Empirically, Morck, Shleifer, and Vishny (1988) find an inverse U-shaped relationship between managerial equity ownership and firm valuation for a sample of U.S. firms. One interpretation is that firms' performance improves with higher managerial ownership, but that, after a point, managers become entrenched and pursue private benefits at the expense of outside investors.

The costs of large shareholdings and entrenchment are formalized in the model of Stulz (1988), which predicts a concave relationship between managerial ownership and firm value. In the model, as managerial ownership and control increase, the negative effect on firm value associated with the entrenchment of manager-owners starts to exceed the incentive benefits of managerial ownership. In that model, the entrenchment costs of manager ownership relate to managers' ability to block value-enhancing takeovers. McConnell and Servaes (1990) provide empirical support for this relationship for U.S. firms.

But ownership structures exhibit relatively little concentration in the United States. Elsewhere, most firms are predominantly controlled by a single large shareholder (La Porta, Lopez-de-Silanes, and Shleifer (1999)). Thus, studying non-U.S. firms can provide evidence about the effects of large shareholders that is difficult to detect in U.S. data. Moreover, the literature indicates that the positive incentive effect relates to the share of cash-flow rights held by large shareholders and that the negative entrenchment effect relates to the share of control rights held by large shareholders. Non-U.S. firms exhibit far more divergence between cash-flow rights and control rights than do U.S. firms, because in most countries, the largest shareholder often establishes control over a firm despite little cash-flow rights. Using a sample of corporations outside the United States, we are thus better able to disentangle the incentive and entrenchment effects of large ownership that are so difficult to tell apart in U.S. data.

To do so, we investigate the valuation of publicly traded East Asian corporations relative to their ownership structures. In previous work, we found that more than two-thirds of East Asian firms are controlled by a single shareholder (Claessens, Djankov, and Lang (2000)). East Asian firms also show a sharp divergence between cash-flow rights and control rights—that is, the largest shareholder is often able to control a firm's operations with a relatively small direct stake in its cash-flow rights. Control is often enhanced beyond ownership stakes through pyramid structures and cross-holdings among firms, and sometimes through dual-class shares, with the divergence between cash-flow rights and control rights most pronounced in

family-controlled firms.<sup>1</sup> Finally, managers of East Asian corporations are usually related to the family of the controlling shareholder. Thus, it is possible to analyze the relative importance of incentive and entrenchment effects in East Asian corporations, because ownership is highly concentrated and the divergence between cash-flow rights and control rights is large, while manager-owner conflicts are generally limited.

Our analysis uses data for 1,301 publicly traded corporations from eight East Asian economies: Hong Kong, Indonesia, South Korea, Malaysia, the Philippines, Singapore, Taiwan, and Thailand. Using regression techniques, we find that relative firm value—as measured by the market-to-book ratio of assets—increases with the share of cash-flow rights in the hands of the largest shareholder. This result is consistent with previous studies on the positive incentive effects associated with increased cash-flow rights in the hands of one or a few shareholders. But we find that the entrenchment effect of control rights has a negative effect on firm value. This finding complements that of Morck, Stangeland, and Yeung (2000). Using data for Canadian public corporations, they show that concentrated corporate control impedes growth, because entrenched controlling shareholders have a vested interest in preserving the value of existing capital. Our work also complements that of La Porta et al. (2002), who document lower valuations for firms in countries with worse protection of minority shareholders. Such countries tend to have more concentrated ownership structures.

Our results also support the predictions of theoretical studies that investigate the effects on firm value of the separation of cash-flow rights and control rights. Grossman and Hart (1988) and Harris and Raviv (1988) show that separating ownership and control can lower shareholders' value and may not be socially optimal. Shleifer and Vishny (1997, p. 759) argue that "as ownership gets beyond a certain point, large owners gain nearly full control of the company and are wealthy enough to prefer to use firms to generate private benefits of control that are not shared by minority shareholders." Bebchuk, Kraakman, and Triantis (2000) argue that separating control rights from cash-flow rights can create agency costs an order of magnitude larger than the costs associated with a controlling shareholder who also has a majority of the cash-flow rights in his or her corporation.

In this article, we show that, for the largest shareholders, the difference between control rights and cash-flow rights is associated with a value discount and that the discount generally increases with the size of the wedge between control rights and cash-flow rights. We do not have strong evidence on which mechanism separating ownership and control is associated with the value discounts. Pyramid schemes, cross-holdings among firms, and the

<sup>1</sup> Pyramiding is defined as the ultimate ownership of a firm running through a chain of ownership of intermediate corporations. Cross-holdings refer to horizontal and vertical ownership links among corporations that can enhance the control of a large, ultimate shareholder. Dual-class shares refer to shares with different voting rights.

issuance of dual-class shares are all associated with lower corporate valuation, but none of the associations is individually statistically significant.

Finally, we investigate whether a certain type of owner—families, the state, or widely held corporations and widely held financial institutions—drives our results. We find that concentrated ownership in the hands of all types of owners is associated with a higher market-to-book ratio. We also find that the wedge between control and ownership is associated with value discounts for family-controlled firms and somewhat for state-controlled corporations, but not significantly when the principal owner is a widely held corporation or financial institution. The differences in valuation effects by type of owner could arise from the fact that managers at firms owned by widely held corporations and financial institutions have fewer ways to divert benefits to themselves compared with managers at firms owned by families and the state.

The rest of the paper is structured as follows. Section I describes the selection criteria for the data sample and the construction of the industry origin, ownership, control, and corporate valuation variables. Section II investigates the evidence on the incentive and entrenchment effects of large shareholdings and conducts some robustness tests. Section III studies the effects of various mechanisms used for the separation of ownership and control, and the relation between the type of ownership and corporate valuation. Section IV concludes.

## **I. Sample Selection and Data**

This section describes the selection criteria used and the resulting sample of corporations. It also provides details on the construction of the data on ownership and control structures and provides statistics on key variables for the sample. Finally, it describes the valuation measure used for the empirical tests that follow.

### *A. Sample Selection*

Our starting point for the data is Claessens et al. (2000), who collected 1996 data on ownership for corporations in Hong Kong, Indonesia, Japan, Korea, Malaysia, the Philippines, Singapore, Taiwan, and Thailand. Their main source was Worldscope, supplemented by other sources that provide ownership structures as of December 1996 or the end of fiscal 1996. From a complete sample of 5,284 publicly listed corporations in the nine East Asian economies, ownership data were collected for 2,980 firms.

For this analysis, we take a subset of these firms. First, we exclude from the sample all Japanese corporations. We do so for several reasons. Worldscope provides data on 1,740 publicly listed Japanese corporations, and Japanese corporations also dominate the sample for which we have ownership data (1,240 of 2,980 corporations). Thus, Japanese firms could influence the results too much. An unbalanced outcome is even more likely given the fea-

tures of Japanese firms—most have dispersed ownership structures, and ownership and management are separated far more often than in other East Asian economies. The most important shareholders in Japan are widely held financial institutions, again unlike many economies in the region. But these financial institutions and their affiliated firms often work together to influence the governance of the owned corporations, a phenomenon that cannot be captured by formal ownership data. Thus, including Japan in our set of East Asian economies would be less useful for disentangling the incentive and entrenchment effects of concentrated ownership and control.

Second, we exclude firms that operate in certain industrial sectors—specifically, financial corporations and regulated utilities. For financial firms, profitability and valuation data are difficult to calculate and to compare with firms in other sectors. For regulated utilities, profitability and valuation can be strongly influenced by government regulations. To determine the primary industry in which each firm operates, we rely on historical segment sales data from *Worldscope*. If such information is not provided, we rely on information from the *Asian Company Handbook* (1998).<sup>2</sup> We next determine the sector to which each firm belongs according to the two-digit Standard Industrial Classification (SIC) system, using the largest share of sales revenue among the firm's activity in each sector. We then use Campbell (1996) to classify firms into 11 industries.<sup>3</sup> We exclude all financial corporations (SIC 6000–6999) and regulated utilities (SIC 4900–4999), making for 304 corporations excluded using those criteria.

Third, we need to know whether a firm consolidates its financial statements and, if so, the method used, because our valuation measure can be distorted by accounting rules on consolidation.<sup>4</sup> Specifically, excessive consolidation of sales and balance sheet items can result when partly owned subsidiaries are treated like fully owned subsidiaries—the full method of consolidation. This method tends to understate the true market-to-book ratio of the consolidated corporation because the book value includes 100 percent of the assets of the subsidiaries, while the market value includes only the actual stakes owned. The market-to-book ratio of the consolidated corporation is not distorted when the corporation uses cost, proportional, or equity consolidation methods. Under these methods, the parent corporation includes its prorated share of subsidiaries in its balance sheet (as well as any dividends received from subsidiaries in its income statement). Accordingly,

<sup>2</sup> We still had to exclude 53 firms that do not report their segment sales to *Worldscope* or the *Asian Company Handbook*.

<sup>3</sup> The industries are petroleum (SIC 13, 29), consumer durables (SIC 25, 30, 36, 37, 50, 55, 57), basic industry (SIC 10, 12, 14, 24, 26, 28, 33), food and tobacco (SIC 1, 2, 9, 20, 21, 54), construction (SIC 15, 16, 17, 32, 52), capital goods (SIC 34, 35, 38), transportation (SIC 40, 41, 42, 44, 45, 47), unregulated utilities (SIC 46, 48), textiles and trade (SIC 22, 23, 31, 51, 53, 56, 59), services (SIC 72, 73, 75, 76, 80, 82, 87, 89), and leisure (SIC 27, 58, 70, 78, 79).

<sup>4</sup> La Porta et al. (2000) further discuss the biases resulting from different consolidation methods.

these methods do not distort balance sheet items and so do not understate the market-to-book ratio.

Worldscope almost always says whether a firm consolidates its financial statements. When Worldscope does not report that information, we exclude the corporation—making for 82 dropped corporations. More than two-thirds of the remaining corporations have consolidated financial statements.<sup>5</sup> Worldscope also indicates whether the consolidation covers all significant subsidiaries and whether the annual report is on a cost basis (unconsolidated). But Worldscope does not indicate at what level the corporation has done the consolidation, and in particular, whether partly owned subsidiaries are treated as fully owned subsidiaries. Lacking that information, we cannot investigate whether the consolidation method used affects the firm valuation. We can only investigate whether the fact that the corporation consolidates or not affects our results.

These sample selection criteria leave us with 1,301 corporations in eight East Asian economies—about 37 percent of the sample of 3,544 publicly traded corporations in these economies.

### *B. Ownership and Control Definitions*

Following La Porta et al. (1999), we analyze ultimate ownership and control patterns. In most cases, the immediate shareholders of a corporation are corporate entities, nonprofit foundations, or financial institutions. We then identify their owners, the owners of those owners, and so on. We do not consider ownership by individual family members to be separate, and we use total ownership by each family group—defined as a group of people related by blood or marriage—as the unit of analysis.

Studying the separation of ownership and control requires data on both cash-flow rights and control rights, which we calculate using the complete chain of ownership. Suppose that a family owns 11 percent of the stock of publicly traded firm A, which in turn has 21 percent of the stock of firm B. We then say that the family controls 11 percent of firm B—the weakest link in the chain of control rights. In contrast, we say that the family owns about 2 percent 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 rights and control rights by using for each firm information on pyramid structures, cross-holdings among firms, and dual-class shares. To determine effective control at any intermediate levels as well as the ultimate level, we need to use a cutoff point above which we assume that the largest shareholder has effective control over the intermediate and final corporations. We use 10 percent as the cutoff point in our empirical analysis because that level is com-

<sup>5</sup> That number is highest for Hong Kong, Malaysia, and Singapore, where 76, 75, and 75 percent of corporations use consolidated accounts, respectively. In contrast, only 34 percent of Korean corporations have consolidated accounts, 51 percent of Indonesian corporations, and 57 percent of Taiwanese corporations.



monly used by other studies. But we also provide information using the 20 percent and 40 percent levels, to show the distributions of large ownership across economies and types of owners.

Information on pyramid structures and cross-holdings among firms is limited because our data cover only listed corporations. Many East Asian corporations affiliated with business groups, and hence with pyramid structures and cross-holdings, are unlisted. At the end of 1996, for example, the three biggest 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. Covering only listed corporations may create a bias in terms of ownership structures and firm valuation. Unlisted corporations could have direct and indirect ownership links with listed corporations, resulting in a possible underreporting of our measures for ultimate control and ownership, since we assume that someone other than a related shareholder controls the unlisted corporations. Anecdotal evidence suggests that such underreporting can lead to considerable underestimates.<sup>6</sup> In addition, complex ownership structures and group-affiliated corporations presumably increase opportunities for the entrenchment of large shareholders—even where ownership structures are similar to those of independent corporations.

Because we likely underestimate the ultimate ownership and influence of large shareholders for group-affiliated firms, we may underestimate the effect of ownership structures on firm valuation. But group affiliation may also affect firm valuation, because there may be intragroup financial transfers that are not market based. The direction of the effect on firm value is unclear. Firm valuations for group-affiliated firms could be lower or higher than for comparable independent firms, depending on the net costs they incur or the net benefits they receive from group affiliation. We control for some firm-specific factors, such as age and size, that may be correlated with the possible net costs or benefits from group affiliation. But these factors likely do not fully control for the influence on firm value of affiliation with specific groups. Thus, we account for the possibility that the valuations of group-affiliated firms are not independent of each other by running regressions in which all firms in a business group are considered jointly.<sup>7</sup>

In terms of dual-class shares, the financial information service Datastream provides data on all classes of listed shares. For the firms under investigation, 88 cases of dual-class shares are found. Of those, some preferred shares are more like debt instruments because they are redeemable

<sup>6</sup> Some Korean firms are illustrative. Samsung Corporation, part of the Samsung *chaebol*, is partly owned by Samsung Life Insurance, which is not listed. But Samsung Life Insurance is controlled by the same family that has a large direct stake in Samsung Corporation, increasing the family's overall control stake in Samsung Corporation. Similarly, control for Samsung Electromagnetic is underestimated because it is also partly owned by Samsung Life Insurance (as well as other Samsung corporations).

<sup>7</sup> Still, not being able to cover unlisted firms in a group does not allow us to fully investigate the effect on firm value of variables like the size of business groups.

or callable at the option of the corporation at a preset price, are convertible into common shares, or receive a fixed cumulative dividend unrelated to the profits of the corporation. We consider such preferred shares to be debt-like instruments and do not include them as shares that further separate ownership and control. Following this methodology, we end up with 43 corporations with dual-class shares—5 in Hong Kong, 37 in Korea, and 1 in the Philippines. Dual-class shares are now legally forbidden in Hong Kong and Singapore, but the corporations in the Hong Kong sample are protected by a grandfather clause. In Indonesia, Malaysia, Taiwan, and Thailand, dual-class shares could exist in principle, but Datastream covers none.

### *C. Sample Characteristics*

The number of corporations for each economy is shown in Table I. Korea has the largest share of corporations in the sample, 21.6 percent, followed by Hong Kong with 17.3 percent. The Philippine sample is the smallest, accounting for 5.9 percent of the corporations. About 20 percent of the corporations in our sample are in the consumer durables industry. Corporations in basic industry, construction, and textiles and trade each account for about 13 percent of the sample. Petroleum companies and unregulated utilities make up the smallest number of corporations in our sample.

In terms of ownership structure, we define corporations as being widely held or having large ultimate owners. We apply the commonly used definition of a widely held corporation as one that does not have any owner with 10 percent or more of control rights. Ultimate owners are split into three groups: families, including all related individuals with large stakes; the state or municipality; and the combined group of widely held corporations and widely held financial institutions, such as banks and insurance companies. Ownership types are used in some of the regressions below to investigate whether any of the effects differ by type of owner.

We start by reporting aggregate data on the distribution of ultimate control by ownership type (Table II). Only four percent of corporations do not have a single controlling shareholder at the 10 percent cutoff level of control rights. Table II also shows ultimate ownership structures at the 20 and 40 percent cutoff levels for the share of control rights in the hands of the largest shareholder (though these higher cutoff levels are not used in our empirical analysis). These higher cutoff levels show how concentrated ownership structures are. At the 20 percent cutoff level, 18 percent of corporations are widely held. In contrast, 77 percent are widely held at the 40 percent cutoff level—indicating that in many corporations, the largest shareholder has a control stake of less than 40 percent. At lower control levels, families are the largest shareholders, covering more than two-thirds of corporations at the 10 percent cutoff level and three-fifths at the 20 percent level.

At the 10 percent cutoff, corporate sectors do not differ much in terms of ownership patterns across the eight economies. (The exception is Korea, which has a larger share—13 percent—of widely held corporations.) More



**Table I**  
**The Sample of Publicly Traded East Asian Corporations by Economy and Industry**

This table shows the distribution of sample corporations across industries and economies. The source of the data is Claessens et al. (2000), *Worldscope*, and *Asian Company Handbook* (1998). The industrial classification is based on Campbell (1996). Industries are defined as follows: petroleum (SIC 13, 29), consumer durables (SIC 25, 30, 36, 37, 50, 55, 57), basic industry (SIC 10, 12, 14, 24, 26, 28, 33), food and tobacco (SIC 1, 2, 9, 20, 21, 54), construction (SIC 15, 16, 17, 32, 52), capital goods (SIC 34, 35, 38), transportation (SIC 40, 41, 42, 44, 45, 47), unregulated utilities (SIC 46, 48), textiles and trade (SIC 22, 23, 31, 51, 53, 56, 59), services (SIC 72, 73, 75, 76, 80, 82, 87, 89), and leisure (SIC 27, 58, 70, 78, 79). The sample excludes financial companies (SIC 60-69) and regulated utilities (SIC 49).

Industry	Hong Kong	Indonesia	Korea, Rep. of	Malaysia	Philippines	Singapore	Taiwan	Thailand	Total	
									Number	Percentage of Total
Petroleum	1	1	12	4	6	3	1	1	29	2.2
Consumer durables	57	17	59	17	7	44	29	29	259	19.9
Basic industry	10	24	55	22	14	16	24	12	177	13.6
Food and tobacco	13	21	20	17	18	18	15	11	133	10.2
Construction	22	4	44	49	11	14	14	16	174	13.4
Capital goods	22	12	35	8	3	21	16	6	123	9.5
Transportation	19	4	6	10	1	12	6	5	63	4.8
Unregulated utilities	5	5	3	3	6	4	1	5	32	2.5
Textiles and trade	43	33	35	15	6	9	17	10	168	12.9
Services	7	7	4	15	3	15	4	7	62	4.8
Leisure	26	4	8	11	2	20	2	8	81	6.2
Total	225	132	281	171	77	176	129	110	1,301	100.0
Percentage of total	17.3	10.1	21.6	13.1	5.9	13.5	9.9	8.5	100.0	

**Table II**  
**Control of East Asian Corporations by Owner Type**  
**and Economy, 1996 (Percentage of Corporations in the Sample)**

Data for 1,301 publicly traded corporations (excluding financial institutions, SIC 60–69, and regulated utilities, SIC 49), based on *Worldscope*, supplemented by information from the *Asian Company Handbook* (1998). All data are as of December 1996 or the end of fiscal 1996. To determine effective control at any intermediate as well as ultimate level, a cutoff level of 10 percent was used in all empirical analyses. Above that level, the largest shareholder is assumed to have effective control over the intermediate or final corporation. The 20 percent and 40 percent cutoff levels are also used here to show the distribution of large ownership across economies and owner types. The percentages in the last four columns sum to 100, subject to rounding.

Economy	Number of Firms in Sample	Percentage of Firms with Dispersed Control	Percentage of Firms with Ultimate Control		
			Family- owned	State- owned	Owned by a Widely Held Corporation or Financial Institution
10 percent cutoff for effective control of the largest shareholder					
Hong Kong	225	0	72	3	24
Indonesia	132	1	73	9	17
Korea, Rep. of	281	13	73	2	12
Malaysia	171	1	75	12	12
Philippines	77	4	51	3	43
Singapore	176	1	55	29	15
Taiwan	129	5	59	2	35
Thailand	110	1	72	5	21
Total	1,301	4	68	8	20
20 percent cutoff for effective control of the largest shareholder					
Hong Kong	225	8	69	1	23
Indonesia	132	6	70	8	16
Korea, Rep. of	281	41	52	0	7
Malaysia	171	11	70	11	9
Philippines	77	19	45	1	34
Singapore	176	9	53	24	14
Taiwan	129	29	47	1	24
Thailand	110	6	68	5	20
Total	1,301	18	60	6	16
40 percent cutoff for effective control of the largest shareholder					
Hong Kong	225	72	20	0	8
Indonesia	132	50	35	5	10
Korea, Rep. of	281	94	5	0	1
Malaysia	171	80	13	2	5
Philippines	77	83	8	1	8
Singapore	176	71	17	5	8
Taiwan	129	93	5	1	1
Thailand	110	53	35	4	8
Total	1,301	77	16	2	5

pronounced differences emerge at the 20 percent cutoff. In Korea, 41 percent of corporations are widely held, while in Indonesia and Thailand only 6 percent of corporations fall into that category, indicating that ownership structures are much more concentrated in Indonesia and Thailand. State control is high in Singapore, at 24 percent, while control by widely held corporations and financial institutions is important in the Philippines, at 34 percent. At the 40 percent cutoff, differences become smaller across economies in terms of type of controlling shareholder (except in Indonesia and Thailand, where families still control more than one-third of the sample corporations).

#### *D. The Valuation Measure*

As noted, we use the market-to-book ratio of assets to measure firm valuation. Researchers have used the market-to-book ratio as well as Tobin's *Q* to measure variations in market values resulting from different ownership structures. Market value is defined here as the sum of the market value of common stock and the book value of debt and preferred stock. To calculate the value of equity, we use end-1996 shares of common stock and stock prices, both from *Worldscope*. We do not try to calculate the replacement cost of assets in the denominator, as we would need to do if we were using Tobin's *Q*, for two reasons. Most important, the data required to calculate replacement values are generally not available, and the eight economies have different ways of accounting for depreciation of physical assets. In addition, we did not want to impose a fixed depreciation formula, given that the age of assets varies by economy. Instead, we use the book value of assets as reported in firms' balance sheets when calculating the market-to-book ratio.

Mean and median market-to-book ratios of the sample corporations are shown in Table III. This table provides insights into the relative value of firms by their main industrial sector and economy of origin. Unregulated utilities have the highest firm valuation, with a mean market-to-book ratio of 1.79 and a median of 1.42. Service and leisure corporations also have high valuations. Firm values are lowest in textiles and trade, with a mean market-to-book ratio of 1.27 and a median of 1.07.

The range of median firm valuations across economies is similar in magnitude to that across sectors. Malaysian corporations have the highest relative valuations, with a mean of 1.70 and a median of 1.43. They are followed by Singaporean corporations, with a mean of 1.63 and a median of 1.38, and Taiwanese corporations, with a mean of 1.59 and a median of 1.35. Korean and Philippine corporations have the lowest valuations. The valuation data reported here for Hong Kong, Korea, and Singapore are lower than those in La Porta et al. (2002). Our median values are 1.12, 1.00, and 1.38, respectively, compared with their 1.15, 1.06, and 1.52. This difference is likely accounted for by the different year of data coverage—1996 compared with 1995—because East Asian stock markets experienced a decline over this pe-

Table III

**Valuations of East Asian Corporations by Economy and Industry, 1996 (Market-to-Book Ratio)**

The market-to-book ratio is the ratio of the market value of assets to the book value of assets at the end of 1996. Market value is defined as the sum of the market value of common stock and the book value of debt and preferred stock. The book value of assets comes from firms' balance sheets. All corporations, including those without an ultimate controlling owner, are included. Industries are defined as follows: petroleum (SIC 13, 29), consumer durables (SIC 25, 30, 36, 37, 50, 55, 57), basic industry (SIC 10, 12, 14, 24, 26, 28, 33), food and tobacco (SIC 1, 2, 9, 20, 21, 54), construction (SIC 15, 16, 17, 32, 52), capital goods (SIC 34, 35, 38), transportation (SIC 40, 41, 42, 44, 45, 47), unregulated utilities (SIC 46, 48), textiles and trade (SIC 22, 23, 31, 51, 53, 56, 59), services (SIC 72, 73, 75, 76, 80, 82, 87, 89), and leisure (SIC 27, 58, 70, 78, 79). The sample excludes financial companies (SIC 60–69) and regulated utilities (SIC 49).

Industry	Hong Kong	Indonesia	Korea, Rep. of	Malaysia	Philippines	Singapore	Taiwan	Thailand	Total
Petroleum									
Mean	0.77	0.37	1.76	1.31	1.19	2.29	1.15	1.20	1.51
Median	0.77	0.37	1.50	1.59	1.01	1.40	1.15	1.20	1.20
Consumer durables									
Mean	1.31	0.92	1.30	1.94	1.48	1.59	1.67	1.20	1.40
Median	1.08	0.79	0.99	2.00	1.24	1.29	1.64	1.23	1.18
Basic industry									
Mean	1.63	1.62	1.10	2.00	1.21	1.67	1.69	1.57	1.48
Median	1.47	1.24	0.99	1.78	1.06	1.47	1.34	1.31	1.17
Food and tobacco									
Mean	1.85	1.65	1.10	1.72	1.13	2.16	1.42	1.40	1.55
Median	1.51	1.45	1.01	1.35	0.92	1.88	1.22	1.31	1.24

Construction									
Mean	1.12	1.35	1.13	1.52	1.53	1.19	1.53	1.24	1.32
Median	1.11	1.38	0.89	1.25	1.18	1.18	1.40	1.02	1.14
Capital goods									
Mean	1.35	1.37	1.27	2.13	0.76	1.61	1.44	1.16	1.41
Median	1.17	1.41	0.91	1.74	0.57	1.58	1.20	1.07	1.17
Transportation									
Mean	1.10	1.38	1.46	1.41	1.56	1.56	1.79	1.23	1.37
Median	1.12	1.26	0.94	1.30	1.56	1.43	1.53	1.22	1.24
Unregulated utilities									
Mean	0.94	1.88	1.93	1.89	1.12	1.76	1.94	3.18	1.79
Median	0.89	1.88	2.08	1.51	1.06	1.51	1.94	1.88	1.42
Textiles and trade									
Mean	1.38	1.15	1.11	1.47	1.16	1.40	1.50	1.04	1.27
Median	1.08	1.02	1.00	1.43	0.97	1.29	1.18	0.85	1.07
Services									
Mean	1.07	1.30	2.43	1.94	1.51	1.66	1.50	1.91	1.68
Median	0.99	1.53	2.34	1.18	1.87	1.58	1.60	1.11	1.36
Leisure									
Mean	1.24	1.65	1.68	1.50	1.32	1.53	2.22	1.13	1.43
Median	1.25	1.58	1.80	1.32	1.32	1.31	2.22	1.21	1.32
Total									
Mean	1.31	1.36	1.25	1.70	1.25	1.63	1.59	1.38	1.43
Median	1.12	1.13	1.00	1.43	1.06	1.38	1.35	1.22	1.19

riod. Another reason for the difference could be that La Porta et al. (2002) use only the 20 to 30 largest publicly traded corporations in each economy, while our samples are much larger.<sup>8</sup>

## **II. Ownership and Control Concentration and Their Effect on Firm Value**

As noted, we seek evidence about the effects of ownership and control concentration on firm value when there is a controlling shareholder. We want to test two hypotheses. The first is that the more concentrated cash-flow rights in the hands of the largest shareholder are, the stronger is that shareholder's incentive to have the firm run properly, because having the firm running properly would raise his wealth; likewise, his incentive to reduce the value of the firm by extracting private benefits is weaker, because doing so would lower his wealth. Both effects should result in a positive relationship between firm values and the largest shareholder's cash-flow rights.

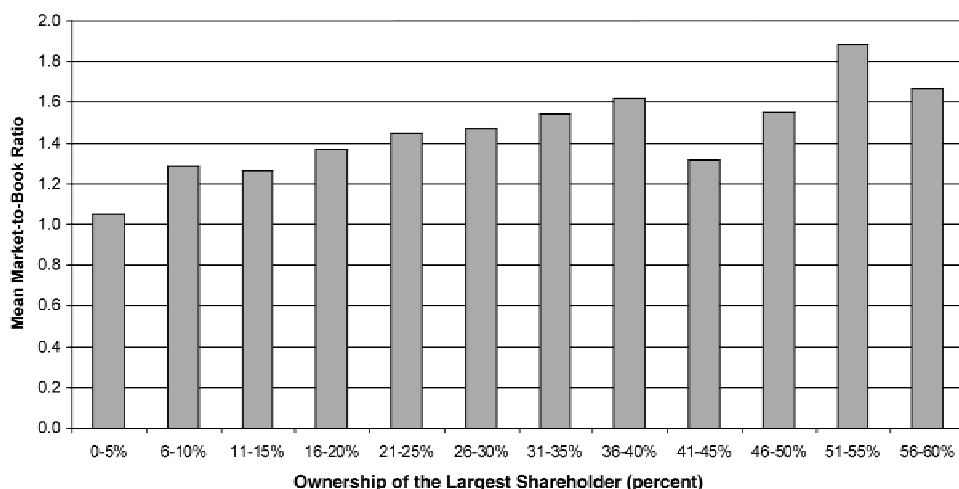
In contrast, the second hypothesis holds that the more concentrated control is in the hands of the largest shareholder, the more entrenched the shareholder is and the better able he is to extract value—to the detriment of the firm's value to minority shareholders. This hypothesis suggests a negative relationship between firm values and the largest shareholder's control rights. The agency problem of entrenchment and value extraction will be especially pronounced when there is a big divergence between control rights and cash-flow rights, because the willingness to extract value is less restrained by the controlling shareholder's cash-flow stake.

### *A. Graphical Evidence*

To investigate these two hypotheses, we first present figures showing the association between market-to-book ratios and the cash-flow and control stakes of the largest shareholder. We then conduct a series of regressions.

<sup>8</sup> In a previous version of this article (Claessens et al. (1999a)), we used an industry-adjusted valuation measure as our dependent variable. Each firm's valuation was adjusted relative to the economy-wide average for the industries in which the firm operated, taking into account the shares each industry represented in the firm's overall sales. The idea was to take out both economy and industry effects, since the economies in the sample are at different stages of development and since firm valuation can vary widely across industries. The adjustment was burdensome, however, because many publicly listed corporations in East Asia operate in multiple segments. For example, if firms are classified as multisegment if they derive less than 90 percent of their sales from one two-digit SIC code, then more than two-thirds of corporations from Hong Kong, Malaysia, and Singapore have multiple segments. In contrast, less than 20 percent of U.S. corporations operate in multiple segments (Claessens et al. (1999b)). Adjusting for multisegment firms thus adds an extra layer of complexity in computing industry-adjusted valuation measures. Still, we ran regressions using these industry adjustments and found similar, even slightly stronger, results as when using the market-to-book ratio; see Claessens et al. (1999a).



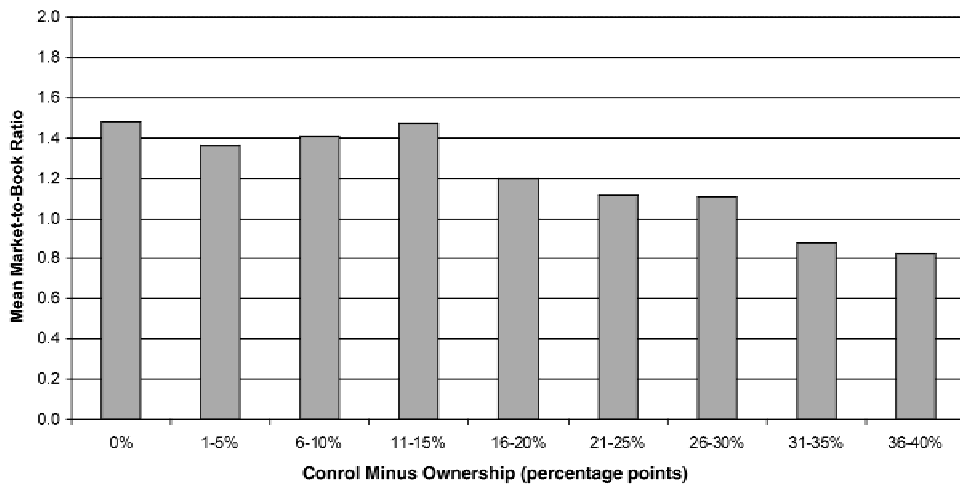


**Figure 1.** Company valuation and ownership of the largest shareholder in East Asian corporations, 1996.

We start by plotting the association between market-to-book ratios and the cash-flow stake of the largest shareholder (Figure 1). Firm value, as measured by the market-to-book ratio, generally increases with the share of cash-flow rights in the hands of the largest owner. This pattern is consistent with the positive incentive effect of larger cash-flow ownership on firm value. But the relationship is not monotone. Ownership by the largest shareholders of 41 to 50 percent, for example, is associated with lower mean market valuation than ownership of 36 to 40 percent, and the difference is statistically significant. Ownership of 51 to 55 percent is associated with the highest mean market-to-book ratios, with valuation falling again for ownership concentration above 55 percent.

The association between firm valuation and the separation of control and ownership rights is shown in Figure 2. The figure suggests that the larger the wedge is between control and ownership rights, the lower a firm's valuation is. Corporations with no separation of control and ownership rights have the highest value. Corporations with a separation of more than 35 percentage points—that is, when the control rights of the largest shareholder exceed his ownership rights by 35 percentage points or more—have the lowest value. Again, the relationship is not monotone. Corporations with moderate levels of separation, such as 11 to 15 percentage points, are valued higher than corporations with separation levels of 1 to 10 percentage points. Once the separation of ownership and control reaches 15 percentage points, however, there is a monotone decrease in firm value.

These two figures provide suggestive evidence on our two hypotheses. Figure 1 provides evidence in favor of the incentive effects associated with increased cash-flow rights in the hands of the largest shareholder. Figure 2 is



**Figure 2.** Company valuation and the difference between control and ownership of the largest shareholder in East Asian corporations, 1996.

generally consistent with the entrenchment effect. As the control rights of the largest shareholder increase relative to his ownership rights, firm valuation appears to fall. But in both figures, the association with market-to-book ratios is not monotone, and here we did not control for other factors influencing firm valuation. Thus, multivariate analysis allowing for nonlinear relationships is needed to investigate more precisely the incentive and entrenchment hypotheses.

### *B. Regression Results*

We start by including as control variables several firm-specific variables commonly used in studies of firm valuation. Specifically, we include sales growth in the previous year and capital spending relative to sales in the previous year. We expect both variables to have a positive relationship with firm value, because they proxy for a firm's growth prospects and investment.

We also include firm age (measured in years since establishment) and firm size (measured by the log of total assets in the previous year). On the one hand, we expect age and size to be positively related to firm value for the same reasons often mentioned in studies of firms in developed economies: older and larger firms have better disclosure, more liquid trading, more attention from analysts, and more diversified activities leading to lower risk of financial distress. On the other hand, younger and smaller firms may have more growth opportunities. Furthermore, in East Asia, smaller firms may be less diversified, leading to smaller value discounts. (Claessens et al. (1999b) show that diversification is associated with a value discount for East Asian corporations.)

We do not expect to introduce significant colinearities in the regressions by using this set of variables, because the correlations between the variables are very low. For example, the correlation between sales growth and capital spending over sales is just 0.0263, and the correlation between firm age and firm size is only 0.1272. We also include industry dummy variables in all the regressions to correct for possible valuation differences among industries. The leisure sector is used as the numeraire.

We next want to control for possible within-economy correlations that could bias our analysis. The Breusch and Pagan (1980) Lagrange multiplier test rejects the null hypothesis that errors are independent within country samples, suggesting that a fixed-effects specification cannot be used. To correct for within-economy correlations, we use a random-effects specification that assumes each sample has a common explanatory variable component, which may differ across economies. In other words, we do not treat corporations in a given economy as independent observations. This specification takes explicit account of the correlated errors among our observations within an economy and produces consistent standard errors. Moreover, a random-effects specification is preferable to fixed effects when a subsample of the population is used, as we have done here (Greene (1997, p. 623)).

Table IV presents regression results that link firm valuation to the ownership and control of the largest shareholder, with ownership and control as continuous variables. The table presents three specifications, with the first the basic regression, the second the basic regression with a dummy added for whether the firm consolidates its financial statements (using either the full or cost method), and the third a specification that investigates possible nonmonotonicity in the relationship. As noted, consolidation tends to understate the market-to-book ratio with the full consolidation method but not with the cost method. Because we do not know the method of consolidation for each firm, the consolidation dummy will pick up the combined effects of no bias of the market-to-book ratio with the cost method and the understatement of the market-to-book ratio with the full method. Thus, we should expect a negative sign for the consolidation dummy.

For all three regression specifications, we find that ownership concentration is positive and associated with increased firm valuation at a statistically significant (one percent) level. The three coefficients for the ownership variable are similar and are economically significant. A one standard deviation increase in the ownership stake of the largest shareholder induces a 0.091 increase in the market-to-book ratio, or an increase of more than 6.4 percent of the average (under regression specification 1). Increases in control rights over ownership rights are associated with lower firm values for all three specifications. The coefficients on the control minus ownership variable are also highly economically significant. A one standard deviation increase in the concentration of control over ownership rights in the hands of the largest shareholder lowers relative values by 0.076—more than a 5.3 percent drop (again under specification 1). The incentive and entrenchment effects of large shareholdings are thus large and economically significant.

**Table IV**  
**Regression Results on the Relationship between Firm Value and  
the Largest Shareholder's Ownership and Control**

The regressions are performed using a random-effects (economy-level) specification. Numbers in parentheses are standard errors. The dependent variable is the ratio of the market value of assets to the book value of assets at the end of 1996. Market value is defined as the sum of the market value of common stock and the book value of debt and preferred stock. The book value of assets comes from firms' balance sheets. The main independent variables are the share of cash-flow rights held by the largest shareholder (ownership) and the share of voting rights held by the largest shareholder (control). Control minus ownership is a continuous variable measuring the simple difference between the share of control rights and the share of cash-flow rights in the hands of the largest shareholder. Control exceeds ownership is a dummy equal to one if control rights are higher than cash-flow rights; otherwise, it is zero. Control exceeds ownership, high is a dummy equal to one if control rights are higher than cash-flow rights and if this separation is higher than the median separation in corporations where control and ownership differ; otherwise, it is zero. Sales growth, capital spending over sales, firm age, firm size, and industry dummies (the leisure sector is the numeraire) are included as control variables. The consolidation dummy equals one if the corporation consolidates its financial statements; otherwise, it is zero.

Independent variable	Specification 1		Specification 2		Specification 3	
Ownership	0.0073 <sup>a</sup>	(0.0020)	0.0073 <sup>a</sup>	(0.0020)	0.0080 <sup>a</sup>	(0.0020)
Control minus ownership	-0.0103 <sup>a</sup>	(0.0033)	-0.0103 <sup>a</sup>	(0.0033)		
Control exceeds ownership					-0.0234	(0.0621)
Control exceeds ownership, high					-0.1260 <sup>a</sup>	(0.0552)
Sales growth	0.5568 <sup>a</sup>	(0.1145)	0.5603 <sup>a</sup>	(0.1147)	0.5574 <sup>a</sup>	(0.1148)
Capital spending over sales	-0.1105	(0.1156)	-0.1100	(0.1157)	-0.1106	(0.1162)
Firm age (years)	0.0005	(0.0012)	0.0005	(0.0012)	0.0007	(0.0012)
Firm size (log of assets)	-0.0476 <sup>a</sup>	(0.0135)	-0.0476 <sup>a</sup>	(0.0135)	-0.0463 <sup>a</sup>	(0.0135)
Consolidation dummy			-0.0260	(0.0467)		
Petroleum	0.1126	(0.1763)	0.1101	(0.1764)	0.1169	(0.1766)
Consumer durables	-0.0601	(0.1042)	-0.0624	(0.1043)	-0.0560	(0.1044)
Basic industry	0.0485	(0.1098)	0.0440	(0.1102)	0.0557	(0.1100)
Food and tobacco	0.0625	(0.1153)	0.0591	(0.1155)	0.0687	(0.1155)
Construction	-0.1313	(0.1100)	-0.1324	(0.1100)	-0.1242	(0.1102)
Capital goods	-0.0498	(0.1172)	-0.0528	(0.1174)	-0.0438	(0.1175)
Transportation	-0.0501	(0.1370)	-0.0491	(0.1371)	-0.0456	(0.1373)
Unregulated utilities	0.3752 <sup>b</sup>	(0.1708)	0.3792 <sup>b</sup>	(0.1710)	0.3655 <sup>b</sup>	(0.1712)
Textiles and trade	-0.2803 <sup>c</sup>	(0.1637)	-0.2794 <sup>c</sup>	(0.1638)	-0.2806 <sup>c</sup>	(0.1641)
Services	0.0873	(0.1835)	0.0861	(0.1836)	0.0834	(0.1839)
Constant	0.8532	(2.4950)	0.8932	(2.4967)	0.4968	(2.4947)
$R^2$	0.0716		0.0718		0.0685	
Number of observations	1,301		1,301		1,301	

<sup>a</sup> Significant at the 1 percent level; <sup>b</sup> significant at the 5 percent level; <sup>c</sup> significant at the 10 percent level.

The regression results do not appear to be influenced by whether firms consolidate their financial statements. When the dummy is included for whether a firm consolidates (Table IV, specification 2), the dummy has a

negative sign but is not statistically significant. More importantly, the coefficients for the ownership, control minus ownership, and other variables barely change, if at all. If firms were more likely to have subsidiaries and consolidate their financial statements when ownership is concentrated, our results would be biased against finding a positive effect on firm value of ownership structures. That the coefficients do not change when we include a dummy for whether firms consolidate suggests that consolidation and the methods used to consolidate do not bias our results.

Figure 2 suggests that the degree of entrenchment of the largest shareholder to the detriment of firm value (and other shareholders) might be higher when there is more than a 15 percentage point gap between control rights and cash-flow rights. The importance for this sample of a high level of separation between control rights and cash-flow rights is confirmed in the regression result that includes two dummies (specification 3). The first dummy—control exceeds ownership—equals one when control rights exceed cash-flow rights. The second dummy—control exceeds ownership, high—equals one when the separation between control rights and cash-flow rights exceeds the median separation for all firms with separation. This median separation is 15.1 percentage points.

The first dummy has a negative coefficient but is not statistically significant. The second dummy is statistically significant at the one percent level and has a large economic effect, because it indicates a 12.6 percentage point reduction in the market-to-book ratio. This outcome suggests that, for this sample of firms, a large wedge between control and ownership stakes leads to value losses.

This critical wedge of about 15 percentage points contrasts with the findings in Morck et al. (1988), who show that the entrenchment effect for U.S. manager-owners becomes apparent at a low concentration of control, starting at just over five percent. This difference may be due to the fact that in Morck et al. and Stulz (1988), entrenchment arises from managers' ability to prevent takeovers. In the United States, it is possible to prevent takeovers with low ownership concentration. But, in East Asia, takeovers are rare to begin with. Presumably, the valuation discount brought about by entrenched owners in East Asia arises from actions other than blocking value-enhancing takeovers. Such other actions may include private benefits and direct expropriation through transfer of financial wealth to affiliated firms, and would require large control stakes. Reducing such behavior by large stakeholders would require strong action by minority shareholders—a difficult task in these economies given their weak corporate governance and poor enforcement (Johnson et al. (2000)).

Among the other explanatory variables, sales growth in the previous year and firm size have significant explanatory power, with sales growth showing a positive coefficient and size a negative coefficient. The first finding is common, because higher growth reflects better future growth opportunities and so higher firm valuation. The second suggests that for this sample, being smaller leads to higher relative valuation, suggesting that small firms

have better growth prospects. Given the East Asian context, lower values for large firms may also derive from their more extensive diversification (Claessens et al. (1999b)).

The other firm-specific variables are statistically insignificant for all three specifications. This is perhaps not surprising given that their simple correlation coefficients with the market-to-book ratio are low. For example, the correlation coefficient between firm age and the market-to-book ratio is only 0.0413. The industry dummies are jointly statistically significant in explaining firm valuation. Individually, however, the only statistically significant industry dummies are for unregulated utilities, with a coefficient of 0.3752, and textiles and trade, with a coefficient of  $-0.2803$  (under specification 1).

### *C. Tests of Robustness*

#### *C.1. Accounting for Group Effects*

Observations within business groups may not be independent due to the common ownership and the sometimes common management of members of such groups, which can lead to intragroup financial transfers that are not necessarily market based. Such transfers could lead to interdependent valuation measures among firms that are members of the same group. To address this concern, we treat all observations within each business group as a single observation and rerun the regressions of Table IV. Because definitions of business groups vary across East Asia, we identify group membership broadly by including all firms in the same group if they are part of a set of firms linked through pyramiding or if they have cross-holdings with other firms. This definition leads to a larger set of affiliated corporations than does the conventional use of ownership links above a certain threshold. As such, this definition should provide a conservative bound on any group effect.

We use two alternative regression specifications when collapsing all observations within each business group into a single observation. The first regresses the median market-to-book ratio within a business group on the medians of the explanatory variables of all corporations belonging to that group. Stand-alone firms, that is, firms not belonging to any group, are treated as separate observations in this regression. In the second specification, we weigh within-group observations with weights equal to the assets contributed by each firm to the group as a share of total group assets, in effect giving more importance to large members of the group. This adjustment accounts for the possibility that within-group ownership structures and net financial transfers lead to a size-related bias in the relationship between ownership structures and firm valuation.

Claessens et al. (2000) show that smaller firms are more likely to be controlled by a single shareholder. If smaller firms also gain more value from group affiliation relative to large firms, as might be expected, then weighing by size would bias our analysis against finding a relationship between own-



ership structures and firm valuation. Again, stand-alone firms are treated as separate observations in the weighted regression. The resulting sample for both specifications has 872 observations.

Table V shows the regression results using both the basic specification of Table IV and the specification that investigates large differences between ownership rights and control rights. We do not use industry dummies in either specification. Industry dummies would not be meaningful, because we collapse all within-group firm observations to one observation per group and because within each group these firms typically engage in many industries. The main results on ownership and control rights are maintained. The ownership stake of the largest shareholder in specifications 1 and 3 continues to have a positive and statistically significant relationship with firm value, with coefficients similar to those in Table IV. The coefficients on the control minus ownership variable are again negative and statistically significant and of the same order as in Table IV.

In the specifications with the dummy variables, 2 and 4, the coefficients are not statistically significant for the first dummy, control exceeds ownership. But they have the same magnitude as the coefficients of the same variable in Table IV. The coefficients are statistically significant for the second dummy, control exceeds ownership, high, and of somewhat larger magnitude than the coefficients of the same variable in Table IV. Comparing the median specifications (1 and 2) and the value-weighted least squares specifications (3 and 4) shows that the coefficients of the ownership variables are similar, suggesting that the distribution of firm size within each business group does not bias the results.

Sales growth is the only statistically significant control variable in these specifications. The magnitude of its coefficient is slightly different from those in Table IV, possibly because of the smaller weight given to firms in business groups. A general comparison of Tables IV and V suggests that entrenchment effects are equally severe in group-affiliated firms, because the coefficients are similar regardless of whether all firms affiliated with a single group are reduced to one observation. Together, the regression results show that the dependence among firms in business groups does not alter our main results for valuation or ownership and control structures.

### *C.2. Results by Economy*

We also study the relationship between firm valuation and ownership and control in the hands of the largest shareholder at the economy level, using the basic specification of Table IV. We include but do not report the four control variables: sales growth, capital spending over sales, firm age, and firm size. Higher ownership rights in the hands of the largest owner are associated with higher valuations in six economies, and this relationship is statistically significant in all six except the Philippines (Table VI). That outcome may be due to the fact that the Philippine sample is the smallest of the eight economies, with just 77 observations. Singapore and Taiwan show

**Table V**  
**Regression Results on the Relationship between Firm Value and the Largest Shareholder's Ownership and Control, by Business Group**

The regressions are performed using a random-effects specification in which all observations within a business group are collapsed into one observation. Stand-alone corporations are treated as separate observations, that is, each is viewed as its own business group. Specifications 1 and 2 are run on the median value within each business group for both the dependent and independent variables. In specifications 3 and 4, the business group observations are reached by weighing each group affiliate observation by its assets as a share of the group's total assets. Numbers in parentheses are standard errors. The dependent variable is the ratio of the market value of assets to the book value of assets at the end of 1996. Market value is defined as the sum of the market value of common stock and the book value of debt and preferred stock. The book value of assets comes from firms' balance sheets. The main independent variables are the share of cash-flow rights held by the largest shareholder (ownership) and the share of voting rights held by the largest shareholder (control). Control minus ownership is a continuous variable measuring the simple difference between the share of control rights and the share of cash-flow rights in the hands of the largest shareholder. Control exceeds ownership is a dummy equal to one if control rights are higher than cash-flow rights; otherwise, it is zero. Control exceeds ownership, high is a dummy equal to one if control rights are higher than cash-flow rights and if this separation is higher than the median separation in corporations where control and ownership differ; otherwise, it is zero. Sales growth, capital spending over sales, firm age, firm size, and industry dummies (the leisure sector is the numeraire) are included as control variables.

Independent Variable	Specification 1		Specification 2		Specification 3		Specification 4	
Ownership	0.0077 <sup>a</sup>	(0.0024)	0.0079 <sup>a</sup>	(0.0023)	0.0070 <sup>a</sup>	(0.0024)	0.0072 <sup>a</sup>	(0.0025)
Control minus ownership	-0.0109 <sup>b</sup>	(0.0045)			-0.0095 <sup>b</sup>	(0.0046)		
Control exceeds ownership			-0.0211	(0.0542)			-0.0178	(0.0517)
Control exceeds ownership, high			-0.1416 <sup>a</sup>	(0.0627)			-0.1387 <sup>a</sup>	(0.0583)
Sales growth	0.6494 <sup>a</sup>	(0.1452)	0.6502 <sup>a</sup>	(0.1453)	0.6404 <sup>a</sup>	(0.1453)	0.6411 <sup>a</sup>	(0.1462)
Capital spending over sales	-0.1297	(0.1307)	-0.1292	(0.1303)	-0.1418	(0.1315)	-0.1422	(0.1318)
Firm age (years)	0.0006	(0.0016)	0.0006	(0.0016)	0.0005	(0.0016)	0.0005	(0.0016)
Firm size (log of assets)	-0.0277 <sup>c</sup>	(0.0160)	-0.0275 <sup>c</sup>	(0.0159)	-0.0260 <sup>c</sup>	(0.0160)	-0.0265 <sup>c</sup>	(0.0161)
Constant	0.4410	(3.2895)	0.4457	(3.2901)	0.5200	(3.2242)	0.5215	(3.2245)
$R^2$	0.0392		0.0398		0.0396		0.0408	
Number of observations	872		872		872		872	

<sup>a</sup> Significant at the 1 percent level; <sup>b</sup> significant at the 5 percent level; <sup>c</sup> significant at the 10 percent level.

Table VI

### Regression Results on the Relationship between Firm Value and the Largest Shareholder's Ownership and Control, by Economy

The regressions are performed on each economy sample using an ordinary least squares specification. Numbers in parentheses are standard errors. The dependent variable is the ratio of the market value of assets to the book value of assets at the end of 1996. Market value is defined as the sum of the market value of common stock and the book value of debt and preferred stock. The book value of assets comes from firms' balance sheets. The main independent variables are the share of cash-flow rights held by the largest shareholder (ownership) and the share of voting rights held by the largest shareholder (control). Control minus ownership is a continuous variable measuring the simple difference between the share of control rights and the share of cash-flow rights in the hands of the largest shareholder. Sales growth, capital spending over sales, firm age, and firm size are included as control variables but are not reported. Industry dummies are not included, given the smaller sample size at the economy level.

Economy	Constant	Ownership	Control Minus Ownership	R <sup>2</sup>	Number of Observations
Hong Kong	1.4429 <sup>a</sup> (0.1877)	0.0088 <sup>a</sup> (0.0037)	-0.0181 <sup>b</sup> (0.0083)	0.0502	225
Indonesia	0.9852 <sup>a</sup> (0.2827)	0.0252 <sup>a</sup> (0.0072)	-0.0133 <sup>a</sup> (0.0059)	0.1583	132
Korea, Rep. of	1.1871 <sup>a</sup> (0.1429)	0.0268 <sup>a</sup> (0.0063)	-0.0038 (0.0107)	0.0675	281
Malaysia	2.0198 <sup>a</sup> (0.2743)	0.0084 <sup>b</sup> (0.0043)	-0.0201 <sup>c</sup> (0.0109)	0.0364	171
Philippines	1.5051 <sup>a</sup> (0.2694)	0.0051 (0.0091)	-0.0019 (0.0204)	0.0056	77
Singapore	2.3004 <sup>a</sup> (0.2237)	-0.0111 <sup>c</sup> (0.0068)	-0.0090 (0.0115)	0.0153	176
Taiwan	2.1297 <sup>a</sup> (0.2113)	-0.0070 (0.0086)	-0.0118 (0.0152)	0.0084	129
Thailand	1.2455 <sup>a</sup> (0.3839)	0.0130 <sup>a</sup> (0.0057)	-0.0190 <sup>c</sup> (0.0105)	0.0389	110

<sup>a</sup> Significant at the 1 percent level; <sup>b</sup> significant at the 5 percent level; <sup>c</sup> significant at the 10 percent level.

a negative relationship between ownership rights and firm valuation, but the relationship is statistically significant only in Singapore.<sup>9</sup>

Most of the coefficients on ownership rights for the economy-specific samples are larger than those for the overall sample. This is especially the case in economies with weaker corporate governance, such as Indonesia and Korea, suggesting that the incentive effects of concentrated ownership are more important in these settings, consistent with the findings of La Porta et al. (2002).

<sup>9</sup> The result for Singapore disappears when state firms are excluded, and the coefficient on ownership rights then becomes marginally significantly positive (at the 10 percent level). This outcome suggests that state-controlled firms are driving the negative coefficient for the sample of Singaporean firms.

The wedge between ownership and control rights is associated with lower valuations in all eight economies, and this relationship is statistically significant in Hong Kong, Indonesia, Malaysia, and Thailand. Again, the statistically significant coefficients are somewhat larger than those for the whole sample. These four economies also display a positive, statistically significant coefficient for ownership stakes, suggesting that incentive and entrenchment effects can go together. That the coefficients are larger suggests that while the incentive effects of concentrated ownership can be more important in settings with weak corporate governance, so can the entrenchment effects, leading to unclear net effects of ownership concentration on firm value.

### *C.3. Reverse Causality*

Another issue that might arise is the possibility of reverse causality in terms of the impact on firm valuation of deviations between ownership and control rights. Suppose that the largest shareholder considers his firm overvalued and wants to invest his money elsewhere. He might then want to lower his ownership rights but maintain his control rights. Firm values would then adjust with a lag to their equilibrium levels. We could then find that as deviations become large, firm valuation becomes lower, but that would tell us little about the possible entrenchment effect of the separation of control and ownership. This possibility would imply changes in ownership and control patterns that are followed (with some lag) by lower valuations.

It seems unlikely, however, that firms can change their ownership structures quickly and frequently in light of temporary overvaluations or undervaluations. (La Porta et al. (1999) report that ownership structures for the top 20 to 30 East Asian firms are relatively stable over time.) More generally, our regression results are based on cross-sectional relationships. The possibility of reverse causality would thus lead to a bias only if insiders changed their cash-flow rights quickly and frequently in light of temporary overvaluations or undervaluations, while maintaining their control rights, and did so systematically across many corporations. Such behavior seems unlikely.

## **III. Owner Types and Mechanisms for Separating Ownership and Control**

Previous research has documented that a large shareholding in general and the separation of ownership and control in particular is usually associated with family ownership (La Porta et al. (1999) and Claessens et al. (2000)). Thus, we investigate whether a particular type of owner is largely responsible for our results. We study separately the effects on firm value of ownership by families, the state, or widely held corporations and financial institutions. The control stakes of the largest shareholder are used to classify firms into one of these ownership categories. The family is the largest blockholder in 908 firms, or nearly 70 percent of the sample. Few corpora-

tions are controlled by the state—111 in total—and most are from Singapore (see Table II). Finally, 282 observations have widely held controlling owners, either corporations or financial institutions.

We also study the relationship between corporate valuation and divergencies in cash-flow rights and control rights for these three types of owners. We use the same specifications as for regressions 1 and 3 in Table IV, with the same firm-specific control variables and industry dummies (the latter are not reported). When we consider the effects on corporate value of ownership and control rights for each type of controlling shareholder, we find that the ownership variable has a similar coefficient for all three types of controlling shareholders (Table VII). Only with the state as controlling owner is the coefficient not statistically significant, and then only for the first specification. Still, significance levels are generally lower than in Table IV. The coefficient for the difference between control and ownership stakes is statistically significant at the 5 percent level for family control and at the 10 percent level for state control.

Some results are less robust, however. In particular, for specifications using the dummy for high divergence between control and ownership as well as the dummy for any difference between control and ownership (specifications 2, 4, and 6), only the coefficient for the first dummy in the case of state ownership is statistically significant. The other coefficients lose their statistical significance. These weaker results could be due to the smaller set of firms for each regression. Nevertheless, the results suggest that family control, and to some extent state ownership, are driving the main results. This could be because managers at widely held corporations and financial institutions are less able than families and the state to efficiently divert benefits to themselves.

So far the results do not yet shed light on which mechanisms separating control rights from ownership rights may be driving the results. As noted, in East Asian corporations, deviations between control and ownership rights come about through different means, including pyramiding, cross-holdings, and dual-class shares. Bebchuk (1999) and Wolfenzon (1999) suggest that pyramiding is associated with value discounts. Cross-holdings could also be associated with value losses because they facilitate nonmarket-based financial transfers among corporations within a group, either horizontally or vertically. Besides pyramid structures and cross-holdings, dual-class shares, while not common in East Asia, can separate control from ownership rights and be associated with value loss. For a larger sample of countries, Nenova (2001) highlights the role of dual shares in environments with poor corporate governance as a mechanism for value transfers.

To measure the importance of each of these mechanisms, we construct dummy variables to explain the relative variations in firm valuation (Table VIII). Pyramid is a dummy equal to one if the firm is part of a pyramid structure (including if it is the apex firm at the top of a pyramid), and zero otherwise. Crosshold is a dummy equal to one if the firm is controlled (at least partly) by a cross-holding, and zero otherwise. Dualclass is a dummy

**Table VII**  
**Regression Results on the Relationship between Firm Value and the Largest Shareholder's Ownership and Control, by Owner Type**

The regressions are performed using a random-effects specification. Numbers in parentheses are standard errors. A corporation is family owned if the largest ultimate shareholder is a family group, state owned if the largest shareholder is the state, and company owned if the largest shareholder is a widely held corporation or financial institution. The dependent variable is the ratio of the market value of assets to the book value of assets at the end of 1996. Market value is defined as the sum of the market value of common stock and the book value of debt and preferred stock. The book value of assets comes from firms' balance sheets. The main independent variables are the share of cash-flow rights held by the largest shareholder (ownership) and the share of voting rights held by the largest shareholder (control). Control minus ownership is a continuous variable measuring the simple difference between the share of control rights and the share of cash-flow rights in the hands of the largest shareholder. Control exceeds ownership is a dummy equal to one if control rights are higher than cash-flow rights; otherwise, it is zero. Control exceeds ownership, high is a dummy equal to one if control rights are higher than cash-flow rights and if this separation is higher than the median separation in corporations where control and ownership differ; otherwise, it is zero. Sales growth, capital spending over sales, firm age, firm size, and industry dummies are included as control variables but are not reported.

Independent Variable	Family		The State		Widely Held Corporation or Financial Institution	
	Specification 1	Specification 2	Specification 3	Specification 4	Specification 5	Specification 6
Ownership	0.0086 <sup>b</sup> (0.0026)	0.0084 <sup>a</sup> (0.0025)	0.0073 (0.0070)	0.0121 <sup>c</sup> (0.0062)	0.0086 <sup>c</sup> (0.0045)	0.0075 <sup>c</sup> (0.0041)
Control minus ownership	-0.0090 <sup>b</sup> (0.0037)		-0.0247 <sup>c</sup> (0.0130)		-0.0189 (0.0154)	



Control exceeds ownership		−0.0494 (0.0722)		0.1218 (0.1845)		0.1086 (0.1816)
Control exceeds ownership, high		−0.0342 (0.0828)		−0.4806 <sup>b</sup> (0.2264)		−0.3685 (0.3331)
Sales growth	0.6621 <sup>b</sup> (0.1341)	0.6323 <sup>a</sup> (0.1358)	0.1833 (0.1241)	0.1847 (0.1346)	0.5105 <sup>b</sup> (0.2491)	0.4833 <sup>c</sup> (0.2557)
Capital spending over sales	−0.1370 (0.1334)	−0.0814 (0.1332)	−0.0043 (0.4329)	0.0229 (0.4341)	−0.0353 (0.2729)	−0.1959 (0.2726)
Firm age (years)	0.0011 (0.0014)	0.0014 (0.0014)	0.0061 (0.0047)	0.0043 (0.0050)	−0.0020 (0.0030)	−0.0030 (0.0031)
Firm size (log of assets)	−0.0358 <sup>b</sup> (0.0169)	−0.0373 <sup>b</sup> (0.0165)	0.0512 (0.0482)	0.0023 (0.0461)	−0.0714 <sup>b</sup> (0.0284)	−0.0889 <sup>a</sup> (0.0278)
Constant	−0.6068 (2.8349)	−1.1551 (2.8243)	−11.4143 (9.4312)	−7.1866 (10.0226)	6.0540 (6.0331)	8.2864 (6.0979)
$R^2$	0.0523	0.0496	0.0450	0.0855	0.0714	0.0811
Number of observations	908	908	111	111	282	282

<sup>a</sup> Significant at the 1 percent level; <sup>b</sup> significant at the 5 percent level; <sup>c</sup> significant at the 10 percent level.

**Table VIII**  
**Regression Results on the Relationship between Firm Value and Pyramiding,  
 Cross-Holdings, and Dual-Class Shares**

The regressions are performed using a random-effects specification. Numbers in parentheses are standard errors. Pyramid is a dummy equal to one if the firm is part of a pyramid structure; otherwise, it is zero. Crosshold is a dummy equal to one if the firm is controlled (at least partly) by a cross-holding; otherwise, it is zero. Dualclass is a dummy equal to one if the firm has issued dual-class shares; otherwise, it is zero. The dependent variable is the ratio of the market value of assets to the book value of assets at the end of 1996. Market value is defined as the sum of the market value of common stock and the book value of debt and preferred stock. The book value of assets comes from firms' balance sheets. The main independent variables are the share of cash-flow rights held by the largest shareholder (ownership) and the share of voting rights held by the largest shareholder (control). Sales growth, capital spending over sales, firm age, firm size, and industry dummies are included as control variables but are not reported.

Independent Variable	Specification 1		Specification 2		Specification 3		Specification 4	
Ownership	0.0119 <sup>a</sup>	(0.0020)	0.0095 <sup>a</sup>	(0.0020)	0.0118 <sup>a</sup>	(0.0020)	0.0091 <sup>a</sup>	(0.0020)
Pyramid dummy	−0.0571	(0.1365)					−0.0136	(0.0524)
Crosshold dummy			−0.0332	(0.0507)			−0.0077	(0.0732)
Dualclass dummy					−0.0468	(0.0703)	−0.1595	(0.1360)
Sales growth	0.5754 <sup>a</sup>	(0.1138)	0.5683 <sup>a</sup>	(0.1146)	0.5778 <sup>a</sup>	(0.1137)	0.5622 <sup>a</sup>	(0.1149)
Capital spending over sales	−0.1149	(0.1157)	−0.0897	(0.1151)	−0.1152	(0.1157)	−0.0862	(0.1153)
Firm age (years)	0.0012	(0.0012)	0.0009	(0.0012)	0.0011	(0.0012)	0.0008	(0.0012)
Firm size (log of assets)	−0.0312 <sup>a</sup>	(0.0136)	−0.0400 <sup>a</sup>	(0.0134)	−0.0314 <sup>b</sup>	(0.0136)	−0.0420 <sup>a</sup>	(0.0134)
Constant	−0.7902	(2.4572)	−0.0173	(2.4722)	−0.7560	(2.4576)	0.1212	(2.4780)
$R^2$	0.0474		0.0480		0.0467		0.0491	
Number of observations	1,301		1,301		1,301		1,301	

<sup>a</sup> Significant at the 1 percent level; <sup>b</sup> significant at the 5 percent level.

equal to one if the firm has issued dual-class shares, and zero otherwise. We run four specifications, using a dummy for each mechanism separately and then combining all three dummies in the final regression. This final regression does not create any collinearity problems, because the three variables are not highly correlated. (The simple correlation between Pyramid and Crosshold is 0.2876, between Pyramid and Dualclass 0.1457, and between Crosshold and Dualclass 0.0174.)

All three dummy variables have a negative coefficient, a sign that these mechanisms reduce value, correcting for ownership structures and other factors. But none of the three is statistically significant. The ownership variable remains positive and statistically significant, with coefficients similar to those in Tables IV and V. While the entrenchment of the largest shareholders in East Asian corporations may thus be supported by combinations of pyramiding, cross-holdings, and dual-class shares, the evidence suggests that the separation of ownership and control is what leads to value discounts, not any mechanism in particular.<sup>10</sup>

An alternative hypothesis to the two we have explored here could be that value discounts are due to bad management, and the likelihood of bad management is related to the ownership structure. Multiple layers of pyramidal ownership and numerous cross-holdings could mean that the controlling owner-manager at the apex of the pyramid does not have the capacity to monitor the managers of all its affiliated firms. The result could be bad performance and value discounts. But Claessens et al. (2000) show that for more than two-thirds of firms with concentrated ownership, managers come from the controlling families. Controlling owners that are managers are thus not limited to apex firms, but are widespread throughout business groups. As such, managers would have few incentives to mismanage firms for which they are also controlling owner. So, although appealing, this alternative hypothesis does not hold for the average corporation in our sample. Nevertheless, we did split the sample into firms managed by people who belong to the controlling shareholder's family and firms with unrelated managers, and we found similar results (not reported).

#### **IV. Conclusion**

This article documents the relationships between ownership and control stakes held by the largest shareholder on the one hand, and market valuation on the other hand, for a large sample of publicly traded corporations in East Asia. Its main contribution is disentangling the incentive and entrenchment effects of large ownership that are so difficult to tell apart in U.S. data. We show that firm valuation increases with cash-flow ownership in the hands of the largest shareholder. This result is consistent with a large

<sup>10</sup> Including in the regression only firms with families as the largest controlling shareholder, however, we find that, for these firms, pyramid structures are negatively related to firm value at a statistically significant (10 percent) level.

literature on the positive incentive effects associated with increased cash-flow rights in the hands of a single or few shareholders. We also find a negative entrenchment effect with large controlling shareholders: Increases in control rights by the largest shareholder are accompanied by declines in firm values. This negative effect is particularly severe for large deviations between control and ownership rights.

When investigating individual ownership types, we find that our results appear to be driven by family control. We also provide support for the predictions of theoretical studies that separating control rights and cash-flow rights can create agency costs larger than the costs associated with a controlling shareholder who also has a majority of cash-flow rights. Because concentrated corporate ownership is predominant in most countries outside the United States, these findings may have relevance worldwide. The results suggest that the risk of expropriation of minority shareholders by large, controlling shareholders is an important principal-agent problem in most countries.

The degree to which certain ownership and control structures are associated with entrenchment discounts likely depends on economy-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. This is especially the case for a number of the economies in this study, because they have been identified as having deficient corporate governance and weak institutional development. The exact magnitude to which institutional differences across economies affect the valuation discount is an important issue for future research.

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