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**The Benefits and Costs of Concentrated Ownership of Firms in East Asia and
Western European Economies: A Simultaneous Equations Approach**

A Dissertation
Presented for the
Doctor of Philosophy
Degree
The University of Tennessee, Knoxville

Rongrong Zhang
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Dedication

This Dissertation is dedicated to my parents, Danxing Zhang and Ruiwen Hong, for
always caring for me, supporting me to reach my goal.

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Abstract

This study uses a simultaneous equations model to examine the impact of ownership structure on corporate policies and performance for listed firms in East Asia and Western Europe. The policy areas examined include dividend, diversification, leverage, and earnings management. Both accounting performance and market valuation are used as performance measures. The empirical analysis reveals that the policy choices are interrelated and have joint impact on firm performance. There exist some regional differences with respect to how ownership structure affects the largest shareholder's policy decisions. These differences are related to the difference in capital market developments and possibly reflect the nonlinear effects of ownership structure as well.

For a sample of 927 listed firms from eight East Asian economies, I find that (1) the level of cash flow rights held by the largest owner is positively related to subsequent dividend payment, diversification, leverage, operating efficiency, and firm value, and negatively related to earnings management; (2) efficiency gains and expropriation costs coexist in firms with concentrated ownership; (3) the expropriation costs increase with the control stake held by the largest owner; (4) firms located in countries with better investor protection pay higher dividends, are less engaged in earnings management, and have superior performance.

For a sample of 1,757 listed firms from 13 Western European economies, I find that (1) the level of cash flow rights held by the largest owner has negative effects on leverage and firm value; (2) the excess control rights are negatively related to dividend payment, diversification, leverage, and firm value; (3) strong investor protection is beneficial to minority shareholders.

Taken together, this study provides some insights regarding how controlling shareholders choose corporate policies for expropriation purposes. The extant literature largely ignore the interrelationships among firm policies and their joint impact on firm performance. In addition, the empirical results for the listed Asian firms suggest that efficiency gains and expropriation costs coexist in firms with concentrated ownership structure. Some of the expropriation costs born by minority shareholders may be viewed as a price paid for the efficiency gains, supporting the view of Grossman and Hart (1980). This study contributes to the growing body of literature on the efficiency of corporate governance mechanisms around the globe.

Preface

This dissertation consists of two essays. Essay 1 addresses the effects of ownership structure on firm policies and performance for a sample of firms from East Asia economies. Essay 2 explores these relationships among Western European firms. Both essays provide background information, literature reviews, model specifications, and discussions on empirical results. At the end of essay 2, a comparison of the results of these two essays is provided.

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Part I. Introduction

Publicly traded firms in East Asia and Western European economies have high ownership concentration. Unlike U.S. firms with relatively dispersed ownership structure, these Asian and Europeans firms often have a controlling shareholder exerting de facto control [see Claessens, Djankov, and Lang (2000) and Faccio and Lang (2002)]. In addition, the ownership structure is further complicated by the use of dual class shares, pyramiding structure, and cross-holding which often lead to controlling shareholders having control rights exceeding their cash flow rights, often referred to as having excess control by large shareholders.¹ High ownership concentration, coupled with relatively poor investor protection, suggests that the primary corporate governance problem in these firms is the conflict between the controlling shareholder and minority shareholders.

I apply a simultaneous equations approach to examine how the ownership structure affects firm policies and performance for listed firms from these two regions in essays 1 and 2 separately. Essay 2 also includes a comparison between the results for the two regions.

¹ The control rights are measured by the voting rights a shareholder is entitled to. The cash flow rights are equal to the equity stake a shareholder owns.

**Part II. The Benefits and Costs of Concentrated Ownership of East Asia
 Firms: A Simultaneous Equations Approach**

1. Introduction

Two effects are hypothesized to coexist in firms with high ownership concentration: (1) an alignment effect, i.e., the high ownership stake held by large shareholders provides them strong incentives to engage in firm value-maximization activities; (2) an entrenchment effect, i.e., if large shareholders obtain sufficient control rights to entrench themselves, they might expropriate firm resources for their private benefits at the expense of minority shareholders. Extant literature hypothesizes that corporate policies may be used for expropriation or bonding devices. In this paper, I try to disentangle these two effects using a simultaneous equations framework based on the assumption that the ownership structure affects corporate policy choices and firm performance.

High ownership concentration may be beneficial to minority shareholders. Grossman and Hart (1980) predict that outsiders who own very few shares would not take over a firm to improve it since the incumbent shareholders will demand a share in the value of the improvement in return for tendering their shares (free-rider problem). In this case, the outsider who has to pay the entire takeover costs and monitoring costs while only gaining on the shares he already owns will not pursue the take-over. As a result there is underinvestment in the search for value improvements, and a loss of efficiency to the firm and society. Grossman and Hart propose that shareholders have an incentive to write a corporate charter that allows the raider to dilute the share value of the non-tendering shareholders once he takes over the firm. This dilution is essentially a

permissible expropriation of minority owners' interests.² In their context, the gain due to large shareholders' monitoring and improvement in efficiency outweighs the loss due to expropriation and minority shareholders are better off as a result. Shleifer and Vishny (1986) also acknowledge the monitoring role of large shareholders.

The conclusion drawn by Grossman and Hart raises an empirical question: what mechanism will be used to allow "dilution". The literature often identifies the perquisite consumption enjoyed by the management or the controlling shareholder as the private benefits of control [Jensen and Meckling (1976)].³ Controlling shareholders also have other means to obtain the private benefits of control, such as outright theft, excessive salaries, special dividends, self-dealing through purchase or sale of assets at prices that deviate from their fair values [Shleifer and Vishny (1997)]. As pointed out by Dyck & Zingales, "small deviations from the 'fair' transfer price might be difficult or impossible to prove in court. If these small deviations are applied to large volume trade, however, they can easily generate sizeable private benefits" [Dyck & Zingales (2004) page 540]. Furthermore, the corporate insider may take advantage of insider information extracted from his privileged position for private gains that are not enjoyed by minority shareholders. Demsetz (1986) suggests that large shareholders possess privileged information and may engage in insider trading. The higher returns from these insiders trading will not be shared with minority shareholders. However, "These wealth transfers, may be viewed as part of the cost born by minority shareholders to encourage more

² Expropriation refers to behaviors through which management or the controlling shareholder transfer assets and profits from corporation to themselves at the expense of minority shareholders. Another term used for expropriation is tunneling. Johnson, La Porta, Lopez-de-Silanes, and Shleifer (2000) and Mitton (2002) provide examples of tunneling in developed countries and in Asian emerging economies.

³ Harris and Raviv (1988) consider the value attached to being in a control position by some shareholders as the private benefits of control.

effective monitoring” [Demsetz (1986) p. 315]. In this case, dilution is manifested in the form of insider trading.

As pointed out by Denis & McConnell (2002), “If large shareholders benefit only from proportionate cash dividends and appreciation in the market value of their shares there is no conflict between large shareholders and minority shareholders.” However, previous studies document that private benefits of control do exist and are quite substantial in some cases [see Dyck & Zingales (2004)].

Using ownership and financial data of firms in East Asia and Western Europe, researchers find support for the hypotheses that corporate policies, including dividend [see Faccio, Lang, and Young (2001a)], diversification [see Claessens, Djankov, Fan, and Lang (2000)], leverage [see Faccio, Lang, and Young (2001b)], and earnings management [see Fan and Wong (2002)] are used to facilitate expropriation by the controlling shareholders. Furthermore, studies document that firms with ownership structure prone to expropriation problems have lower Tobin’s Q and lower operating efficiency [see Claessens, Djankov, Fan, and Lang (2002) and Joh (2003)]. These studies typically use a single-equation OLS regression approach and examine a one-to-one relationship between ownership and policy/performance. As an example of the problem with the single-equation OLS methodology in this context, consider two papers by Faccio, Lang, and Young (2001a and 2001b). Faccio, Lang, and Young (2001a) regress leverage on ownership structure variables while Faccio, Lang, and Young (2001b) regress dividend ratios on ownership variables. However, if leverage and dividend policies are interdependent, each OLS analysis suffers from specification error. Another example of a single-equation OLS approach is in the paper by Claessens, Djankov, Fan,

and Lang (2000) in which they regress a diversification measure on ownership structure. However, the decision to diversify may also be related to firms' dividend and leverage policies [see Appendix A for an example of how the controlling owner may use a combination of firm policies to facilitate his expropriation activities]. In summary, the single-equation OLS approach overlooks the fact that corporate policies that may be used for expropriation purposes are interrelated, i.e., can be substitutes or complements to one another.

Crutchley and Hansen (1989) contend that managers choose their stock ownership, corporate dividend and leverage policies to minimize agency costs. Therefore, these policy decisions are interdependent. Using a reduced form equation approach, they find that firms with lower diversification costs have higher managerial ownership, rely less on leverage and dividends to control agency costs. Using a 3SLS simultaneous equations approach, Jensen, Solberg, and Zorn (1992) document that insiders ownership, corporate dividend and leverage policies are interrelated directly and indirectly through firm-specific characteristics. They also suggest that the relationship runs from ownership to dividend and leverage policies.

In this study, I adopt a simultaneous equations approach to empirically examine (1) whether the controlling shareholders use a combination of corporate policies to acquire private benefits; (2) the potential tradeoff between efficiency gain and expropriation costs. My approach is different from Solberg, and Zorn (1992) in that they consider the insider ownership is endogenous. Given that the East Asian firms are largely family controlled and the founding families are unlikely to relinquish their controls, the

ownership structure is rather stable overtime, I consider the ownership is exogenous in the insider's decision making process.

For a sample of 927 listed firms from eight East Asian economies, I find that (1) dividend, diversification, leverage policies as well as management of earnings are simultaneously determined in the insiders' decision-making process; (2) the cash flow rights held by the largest owner is positively related to subsequent dividend payment, diversification, leverage, operating efficiency, and firm value, and are negatively related to earnings management; (3) at low levels of control, the excess control held by the largest owner is positively related to dividend payment, diversification, leverage, operating efficiency, and firm value, and negatively related to earnings management; The effect of excess control diminishes as control increases. Additionally, I find that, even after controlling for differences in ownership structure, (4) firms located in countries with better investor protection pay higher dividends, are less engaged in earnings management, have higher efficiency and market value.

I also test the sensitivity of the policy and performance measures for a given change in cash flow rights and excess control held by the largest owner. The results indicate that the increase in control either through cash flow rights or excess control generally have positive effects on dividends, operating efficiency, and firm value, supporting the alignment effect hypothesis. I further carry out the same tests for two subsets of firms: high control firms (the largest owner has control rights above the sample median) versus low control firms (the largest owner has control rights below the sample median). The results suggest that the expropriation problem is more severe for high control firms, supporting the entrenchment hypothesis. The controlling owners with de

facto control are more likely to use leverage and earnings management for expropriation purposes. The efficiency gain attributable to the presence of large shareholders is diminishing with the increase in control by the largest owner, implying that there are either diminishing returns to monitoring or that expropriation costs are increasing.

Taken together, the results support the views of Grossman and Hart (1980) and Shleifer and Vishny (1986) that the presence of large shareholders provides efficiency gains. The results also reveal that expropriation costs and efficiency gains coexist in firms with concentrated ownership. Some of these expropriations borne by minority shareholders may be viewed as a price paid for the efficiency gains. In the Grossman and Hart context, this is a form of *dilution* that is ex ante acceptable to minority shareholders.

This paper contributes to the literature in two ways. First, this study adds to the growing body of literature that focuses on the corporate governance arrangements outside the U.S. As pointed out by La Porta, Lopez-de-Silanes, Shleifer, and Vishny (2002, page 1148) (hereafter LLSV) “it is important to recognize the differences in the structure of ownership and control among firms both within and across countries, since these differences influence the power as well as the incentives of the controlling shareholders to expropriate minority shareholders....” Researchers who have examined the differences in corporate governance systems across countries disagree upon which system is the most efficient arrangement. Bhidé (1993) suggests that there exists trade-offs among different corporate governance mechanisms. Gilson (2000) argues that competitive forces would prompt nations to adopt a single efficient governance form that is compatible with their existing institutional arrangements and economic development. He asserts that the de facto convergence in corporate governance is more likely to prevail by allowing the

improvement in governance practice without changing the fundamental institutional and legal rules.⁴

The second contribution of this study is that by adopting a simultaneous equations approach, I account for the interrelationships among multiple corporate policies and firm performance. Specifically, I find evidence that dividend, diversification, leverage, and earnings management are interrelated policy choices. Furthermore, ownership structure has direct and indirect effects (via policies) on firm performance. Previous studies that use OLS approach do not provide insight regarding these interrelationships.

The remainder of this paper is organized as follows. Section 2 describes the agency problem in firms with concentrated ownership. Section 3 introduces the simultaneous equations model and sample. Section 4 presents empirical results. Section 5 discusses robustness checks of model specification. Section 6 concludes.

2. Ownership structure, corporate policies and performance

In this section, I first discuss the negative entrenchment effect and positive alignment effect associated with concentrated ownership. Next, I review some recent empirical findings regarding international differences in firms' ownership structures and corporate policies and how these policies are related to ownership structures and performance.

2.1. Negative entrenchment effects

Maintaining concentrated ownership is accompanied by its own set of costs. The interests of large shareholders may not be entirely consistent with firm value

⁴ The literature on corporate governance convergence introduces two types of convergence: De jure convergence which refers to the adoption of similar corporate governance laws across countries versus De facto convergence which refers to the convergence in governance practice.

maximization. With effective control, large shareholders are often insulated from the pressure of the market for corporate control or monitoring from other shareholders, while only subject to the restraint of the legal protection of minority shareholders and the discipline of the capital market.⁵ Minority shareholders can only benefit through value appreciation of their equity stake and cash dividends in proportion to their cash flow rights. However, in addition to the same benefits enjoyed by minority investors, large shareholders may use their discretion over corporate policies to derive private benefits of control that typically are value-destroying. As pointed out by Cronqvist et al. (2003, page 1), “rational [controlling minority shareholders] face a trade-off between value-enhancing activities and further extraction of private benefits when maximizing their total utility....”.⁶ This problem is similar to the managerial entrenchment problem [see Morck, Shleifer, and Vishny (1986)]. The entrenchment problem is further exacerbated when the controlling owner has control rights beyond his cash flow stake since the cost born by the controlling owner is only proportional to his cash flow stakes.

2.2. Positive alignment effects

Berle and Means (1932) and Jensen and Meckling (1976) argue that the separation of ownership and control results in the owner-manager conflict. In a widely held firm, the main agency conflict is between managers and owners. The atomistic incumbent shareholders are unable and unwilling to monitor the performance of the management. Both Grossman and Hart (1980) and Shleifer and Vishny (1986) show that

⁵ If a firm does not have enough internal funds for new investment and has to raise funds in the equity capital market, it will be subject to the scrutiny of the capital market and may have to compete for funds by cultivating a reputation for offering competitive returns on investments.

⁶ They use controlling minority shareholders (CMS) to refer to shareholders with control rights greater than their cash flow rights. Value-enhancing activities will increase the value of equity held by CMS.

increased monitoring of the large shareholder mitigates the agency problem between owner and managers and enhances firm performance. Furthermore, due to his high ownership stake, the large shareholder may have incentives to become actively engaged in setting firm policies to maximize firm value. In a study of the impact of corporate governance on stock performance during the Asian financial crisis, Mitton (2002) finds that ownership concentration is positively related to stock returns of 398 firms from five Asian economies.⁷

2.3. Ownership structure and corporate policies around the world

2.3.1. Dividend policy

The managers/controlling shareholders not only benefit from cash dividends and capital gains proportionate to their ownership stake, but also have opportunities for private gains. Easterbrook (1984) proposes that dividend payments force firms to raise fund from capital markets which provide monitoring of managers. Therefore, the managerial agency problem can be mitigated through dividend policy. Jensen (1986) views dividend policy from the perspective of free cash flow problem, that is, managers/controlling shareholders may pay lower dividends in order to retain resources which can be used for excessive salary, perquisite consumption, or investing in projects that benefit themselves while decreasing overall firm value. Increasing dividends payments mitigate free cash flow problem. Dividend policy is hypothesized as a bonding device to signal outsiders that they will not be expropriated. For example, Faccio, Lang, and Young (2001b) find that firms that are tightly affiliated with business groups pay

⁷ He finds that the stock return premium is largely attributable to firms having large shareholders that are independent of management.

more dividends when they are perceived to be prone to expropriation problems. They do not address whether minority shareholders are better or worse off given the coexistence of large dividend payment and high expropriation costs.

2.3.2. Diversification

Diversification can also be used for expropriation purposes. Claessens, Djankov, Fan, and Lang (2000) test three hypotheses regarding the large shareholder's incentive to diversify the business, namely: (1) the internal capital market hypothesis, which suggests that diversification creates an internal capital market that is more cost-effective than the external capital market; (2) the risk-reduction hypothesis, stating that the largest owner uses diversification to reduce the risks associated with firm-specific investments; (3) the expropriation hypothesis, stating that the largest owner makes new investments to generate private benefits.⁸ Both (2) and (3) imply a positive relationship between ownership/control and value-destroying diversification. However, Claessens, Djankov, Fan, and Lang (2000) point out that when the largest owner holds a low cash flow stake and high control stake, he bears little firm-specific risk and therefore the incentive to diversify firm-specific risk is diminishing, the incentive to expropriate is increasing because his share of expropriation costs is decreasing. Their results support hypothesis (3), i.e., diversification is positively associated with the difference between control and cash flow rights of the largest owner, particularly at high levels of control.

⁸ Mitton (2002) suggests that the opacity of diversified firms in the emerging Asian market give insiders more opportunity to engage in expropriation activities.

2.3.3. Leverage

Leverage is hypothesized to be used by insiders to enhance control and thereby facilitate their expropriation activities. For example, Harris and Raviv (1988) argue that controlling owners use leverage to inflate their voting power and thus reduce the discipline of the market for corporate control. Faccio et al. (2001a) study the impact of ownership concentration on leverage using a sample of listed firms from five European and nine Asian countries. They document that debt facilitates expropriation by allowing controlling shareholders to retain control without assuming liabilities directly or diluting their control stakes.

On the other hand, insiders may use leverage as a bonding device to mitigate agency problems. For example, Jensen and Meckling (1976) propose that debt constrains managerial expropriation via reducing free cash flow at managers' discretion. In the context of leveraged buyouts, Jensen (1986) proposes that increasing leverage can reduce the agency costs of free cash flow. Ross (1977) suggests a signaling equilibrium in which "high quality" firms identify themselves by adopting high debt levels. Fama and Jensen (1983a,b) argue that debt limits managers' ability to expropriate minority shareholders in U.S. firms due to managers' career concerns.

2.3.4. Earnings management

Previous literature shows that earnings management is also an important policy in the context of agency theory. Warfield et al. (1995) find that managerial ownership is positively related to earnings informativeness and negatively related to the magnitude of discretionary accruals, suggesting that high ownership stake aligns management's interests with minority shareholders and thereby alleviates the earnings management

problem. Fan and Wong (2002) suggest that the entrenched controlling shareholders manipulate earnings to hide their expropriation activities, resulting in lower earnings informativeness. Leuz et al. (2003) find that earnings management problems are less severe in countries with strong investor protection and dispersed ownership structure. In addition, managers/controlling shareholders might manipulate earnings to relieve accounting based constraints, for example, to meet debt covenant requirements. On the other hand, if concentration ownership structure enhances efficiency, we may observe less earnings management in firms with concentrated ownership since the increased efficiency may mitigate the need to artificially inflate earnings.

2.4. Ownership structure and performance

Extant literature often use two performance measures when examining the effect of ownership structure on firm performance: (1) operating efficiency, measured by return on total assets, and (2) the market-to-book ratio of assets. The first measure is used to test the hypothesis that concentrated ownership improves firm efficiency. The second measure is used to examine the market assessment of firm value, given existing policy combinations and operating efficiency.

2.4.1. Operating efficiency

Concentrated ownership affects operating efficiency in two ways: (1) the presence of a large shareholder mitigates managerial agency problem and improves operating efficiency [see Grossman and Hart (1980), Shleifer and Vishny (1986)]; (2) large shareholders may behave opportunistically for their private benefits which may lead to inefficient resource allocation such as buying or selling assets of firms under their control at prices unfair to minority shareholders. In her study of a sample of Korean firms, Joh

(2003) finds that the controlling shareholders' cash flow rights are positively related to firm efficiency measured by return of total assets (ROA) whereas the divergence between control and cash flow rights of the controlling owner is negatively related to ROA.

2.4.2. Valuation

Concentrated ownership structure has offsetting effects on firm performance, namely, a positive effect due to efficiency enhancement versus a negative effect due to excessive expropriation. In the context of Grossman and Hart (1980), a certain degree of dilution of non-tendering shareholders interests is ex ante acceptable to minority shareholders. However, if minority shareholders' share of efficiency gain is less than expropriation costs attributable to large shareholders, they may discount firm value. Claessens, Djankov, Fan, and Lang (2002) argue that the concentrated ownership structure of East Asian firms is associated with severe agency conflict between the controlling owner and minority shareholders, manifested in the form of lower valuation. They find that high cash flow rights held by the controlling owners are positively related to firm value (the alignment effect) and the divergence between their control and cash flow rights is negatively related to firm value (the entrenchment effect). Morck, Shleifer, and Vishny (1986) document a nonmonotonic relationship between board ownership and firm value (Tobin's Q) using a sample of 371 Fortune 500 firms. LLSV (2002) find that

cash flow rights held by controlling owners are positively related to firm value using a sample 539 large firms from 27 economies.⁹

2.5. Summary

Taken together, from the standpoint of minority shareholders, the presence of large shareholder presents both benefits (efficiency gain) and costs (expropriation costs). The studies reviewed above establish the link between ownership structure and corporate policies as well as performance (see Appendix B for a summary of hypotheses). Clearly, the four policies (dividend, diversification, leverage, and earning management) are closely interrelated via a firm's accounting and cash flow constraints.

Ownership structure has two tiers of effects on firm performance: (1) an indirect impact through the four policies described above; and (2) a direct impact. The empirical studies reviewed above only look at the one-to-one relationship between ownership and another variable of interest (policy or performance measures). Their single-equation empirical approach fails to account for the interrelationships among the variables. In particular, it has failed to establish a linkage between financial performance and the specific financial policy behaviors attributed to controlling shareholders.

3. Methodology and sample

In this study, I take ownership structure as predetermined and policies and performance as endogenous and simultaneously determined. This approach, coupled with the general observation that ownership structure is rather stable over time, considers the ownership structure as predetermined and that it influences the subsequent policy choices

⁹ Claessens, Djankov, Fan, and Lang (2002) use both cash flow rights and excess control held by the largest owner in their regressions. Morck, Shleifer, and Vishny (1986) and LLSV (2002) only use cash flow rights held by insiders in their models.

made by the controlling shareholders. Specifically, I explore how the ownership structure affects the controlling shareholders' choices of dividend, diversification, leverage and earnings management. Previous studies suggest that corporate insiders may use some of these policies either as bonding devices or as means to facilitate expropriation. In addition, the methodology incorporates the interrelationships between policy choices and firm performance.¹⁰

3.1. Model specification

The model consists of two groups of equations: the policy group and the performance group. The policy group consists of equations (numbered parenthetically) for the four jointly determined corporate policies: dividend (1), diversification (2), leverage (3), and earnings management (4). Each individual policy variable is regressed against ownership structure variables, other policy and performance variables, and variables that capture firm-specific and country-specific characteristics. The performance group consists of equations for firm operating efficiency, using the accounting measure operating cash flow on total assets (CFTA) (5), and a market valuation measure, market-to-book value of assets (MB) (6).

The six-equation model is based on the assumption that ownership structure affects the controlling shareholders' incentives to simultaneously use the four policies either to engage in value-enhancing activities or to extract private benefits of control. Ownership structure is hypothesized to have direct and indirect (through the four

¹⁰ For a sample of Fortune 500 manufacturing firms, Cho (1998) shows that investment affects firm value and firm value affects ownership structure. For a random sample from COMPUSTAT universe, Himmeberg, Hubbard, and Palia (1999) use a fixed effects model to control for unobserved firm heterogeneity and document a quadratic relation between ownership and firm performance. Given that the majority of the Asian firms included in this study are family controlled, the ownership structure is less likely to be endogenous.

corporate policies) effects on operating efficiency and valuation. Additionally, the model allows for the “feedback” of operating efficiency into the policy choices.

3.2. Sample

The ownership structure data are taken from Claessens, Djankov, and Lang (2000) which trace the ultimate owner’s cash flow and voting rights of 2,980 publicly traded firms (financial and nonfinancial firms) from 9 East Asian economies.¹¹ Claessens, Djankov, Fan, and Lang (2002) suggest that the valuation of financial industries and regulated utilities are not comparable to firms in other industries. Hence, I exclude corporations in the financial industry (SIC: 6000~6999) and regulated utilities firms (SIC: 4900~4999). I also exclude Japanese firms because they have distinctive institutional characteristics and their ownership structure is more dispersed compared to that of firms from the other eight East Asian economies.¹² I collect annual financial and business segment data for individual firms using the WorldScope database (2003). I was able to match 1083 firms having financial and segment information obtained from Worldscope database with firms having ownership structure data from Claessens, Djankov, and Lang (2000) by company names.¹³

¹¹ The nine East Asian economies include Hong Kong, Indonesia, South Korea, Malaysia, the Philippines, Singapore, Taiwan, Japan, and Thailand.

¹² Most Japanese corporations are members of keiretsu which is a complex web of intercorporate ownership centered around large banks. As large creditors, coupled with moderate stock ownership, banks exert significant influence over the firms they control [see Morck, Nakamura, and Shivdasani (2000)]. However, the dual roles played by banks may create conflict of interests between the controlling shareholder (banks) and the minority shareholders. The unique situation of these Japanese firms is not captured by the ownership data used in this study.

¹³ Often times, the names are abbreviated in one source but not the other. Whenever I can not find a match for the firms from the ownership database, I search by the most unique words in the firm name in the Worldscope database. Sometimes, Worldscope indicates the name of the firm has changed and the previous name was the same as the name in the ownership data. Then I consider the firm having the new name as the same one in the ownership database.

The ownership data is as of December 1996 or fiscal year 1996. To construct the policy and performance measures, I use the three-year (1998~2000) average values post the year for which ownership data is collected. I skip year 1997 to minimize the distortions of financial ratios due to the Asian Financial Crisis. I use the three-year mean values to smooth out transitory factors. The final sample includes 927 firms which have all the information required to construct the policy and other firm-specific control variables.¹⁴ I perform a cross-sectional analysis by pooling firms across eight East Asian economies including Hong Kong, Indonesia, South Korea, Malaysia, the Philippines, Singapore, Taiwan, and Thailand.

3.3. Ownership and endogenous variables

Both control rights and cash flow rights affect the controlling owner's incentive to either improve firm value or engage in expropriation activities for his private benefits. Jensen and Meckling (1976) and other researchers suggest that increasing insiders' ownership stake will align their interest with minority shareholders which may lead to firm value maximization. Control rights potentially give the controlling shareholder the power to use firm policies for private gains. For a given level of control rights, the smaller the cash flow rights, the lower the cost of expropriation born by the controlling shareholder.¹⁵ Therefore, all else equal, the larger the divergence between the control and cash flow rights held by the controlling shareholder, the stronger his incentive is to

¹⁴ My sample size is smaller than that of Claessens, Djankov, Fan, and Lang (2002) which also use financial data from WorldScope database and ownership data assembled by Claessens, Djankov, and Lang (2000). They have 1,301 firms in the sample. The ownership data is as of December 1996 or fiscal year 1996. My source of financial information is from 2003 Worldscope database. Over time, bankruptcy, merger and acquisition and other corporate restructuring activities causes some firms originally in the ownership data sample to drop out.

¹⁵ The expropriation is akin to the perquisite consumption in the Jensen and Meckling (1976) framework.

expropriate minority shareholders. To disentangle the alignment and entrenchment effect of ownership structure, my analysis focuses on two metrics of ownership structure: (1) the cash flow rights (Own), and (2) the divergence between control and cash flow rights (Excess) held by the largest owner. All else equal, high Own will prompt largest owners to take value-enhancing actions. Excess is used as a proxy for the largest owner's incentive to expropriate minority shareholders.

Among others, Morck et al. (1988) document nonlinear ownership effects. Hence, I include an interaction term (Ex_c) which is the product of excess control (Excess) and a binary variable High_c to account for this nonlinear effect. High_c is set to 1 if the control rights held by the largest owner is above sample median control rights (0.30) and 0 otherwise. Hence, when the control rights are higher than the sample median, the total impact of excess control will be captured by the sum of the coefficients on Excess and Ex_c. From a modeling standpoint, I include ownership structure variables to capture the direct effect of ownership structure that are not captured indirectly by the endogenous policy variables in all six equations.

The dividend policy (Dividend) is measured as total dividends paid divided by total assets. I use the number of 2-digit SIC segments within a firm as the diversification measure. Leverage is the ratio of the sum of long-term and short-term debt over total assets. The degree of earnings management (Accruals) is measured by mean absolute deviation of the total accruals to assets ratio from its long-term mean [see Appendix C for the computation of total accruals]. It is known that total accruals are mean reverting. Accruals of a firm that engages in earnings management will have relatively large deviations from the long-term mean. I first compute the firm's average ratio of total

accruals to total assets over 1992~1996. Then for 1998 through 2000, I subtract this mean from each firm's individual year's ratio to obtain the deviation. Accrual is defined as the average of the absolute values of these deviations. I use the ratio of cash flow from operations to total assets (CFTA) to measure a firm's operating efficiency. Worldscope defines cash flow from operations as the sum of net income and all non-cash charges or credits. It is computed after interest and taxes but before changes in working capital. The other performance measure, Market-to-Book, is computed as the ratio of the sum of total book value of debt and preferred stock plus the market value of equity over total book value of assets.

In each policy equation, other policy variables are also included as control variables to explore their interrelationships. For example, in the dividend equation, Dividend is regressed on Leverage, Diversification, and Accruals. Lang and Stulz (1994) suggest that highly levered firms pay lower dividends because they have to pay higher interest rate on their loans. Jensen (1986) suggests that leverage and dividends are substitutes in controlling agency problems. The same conclusion is implicit in Ross (1977). Dividend and Leverage are also related through the cash budget constraint. Debt may be used to finance dividend payment. Diversification potentially creates an internal capital market that may reduce the need for external financing. Therefore, I control for firm diversification in both the dividend and leverage equations.

CFTA is also used in all the policy equations. All else equal, firms with better operating performance (higher CFTA) tend to pay larger dividends and, for given growth opportunities, rely less on outside debt (less leverage). High CFTA also allows firms to acquire more assets (increased diversification). Firms with low CFTA may tend to have

high accruals because the controlling owner manipulates earnings to hide poor performance in order to avoid outsider's scrutiny or relieve accounting constraints imposed by creditors, *ceteris paribus*.

In equations 5 (CFTA) and 6 (MB), I control for the effect of diversification on operating efficiency and valuation. Previous studies document that diversified firms trade at a discount relative to specialized firms [see Lang and Stulz (1994), Berger and Ofek (1995)]. Diversification motivated by risk aversion of the controlling shareholder may result in inefficiency (lower CFTA) and a diversification discount (lower market-to-book ratio). More recent studies offer new interpretations of documented diversification discount. For example, Campa and Kedia (2002) find that diversified firms trade at a discount prior to diversification, suggesting the selection bias of studies documenting diversification discount. Villalonga (2004) uses the Business Information Tracking Series database to construct measures of diversification and finds a diversification premium. Villalonga points out that the traditional measure of diversification, which is the number of different 2-digit SIC segments a firm operates in, captures mainly the aspect of conglomerate diversification. Therefore the documented diversification discount in previous studies is primarily attributable to conglomerate discount. My analysis uses the traditional diversification measure. By including diversification in equation 5, I test whether conglomerate diversification is efficiency enhancing. The financial policy variables (dividend, leverage, accruals) are not included in CFTA equation because firm efficiency directly affects its choice of financial policies (a feedback effect), but financial policies do not affect operating efficiency. However, since CFTA is computed excluding interest charges, I expect leverage to have a negative effect on CFTA, all else equal.

Equation (6) reflects the impact of ownership structure on market assessment of firm value. I include all policy choices as explanatory variables to test the indirect impact of ownership structure (via policies) on firm value. In addition, I control for the effect of operating efficiency on valuation by including CFTA as an independent variable. As discussed earlier, ownership structure and diversification affects CFTA. Therefore, the effect of CFTA in equation (6) reflects an indirect effect of ownership. To account for the effect of ownership structure that is not already captured by those policy variables and CFTA, I also include ownership variables as independent variables. The coefficients on these ownership variables reflect the direct effect of ownership structure on firm performance. To obtain the net effects of ownership variables, I will use reduced form coefficients from the simultaneous equations model.

3.4. Investor protection measures

LLSV (1997, 1998, 2000) demonstrate that the legal protection of minority shareholders plays an important role in corporate governance arrangements. Countries with strong protection of minority shareholders have more developed financial markets; their firms have easier access to external financing, and pay higher dividends. Some important legal determinants used as explanatory variables in this study include a country's legal origin, reserve requirements (Reserve), Anti-director index, and creditor rights [source: LLSV 1998]. The reserve requirement may affect firms' dividend policy.¹⁶ All else equal, high reserve requirements result in lower dividend payment. A high anti-

¹⁶ Reserve is measured as the minimum percentage of total share capital that the host country's corporate laws mandate for corporations to hold to prevent their dissolution. Under this restriction, corporations are required to retain a proportion of their annual earnings until the threshold is reached. This restriction prevents firms from distributing all its earnings as dividends.

director index implies strong shareholder protection whereas high creditor rights implies better creditor protection.

The sample firms come from eight countries with three different legal origins: English common law (Hong Kong, Malaysia, Singapore, and Thailand), French civil law (Indonesia, Philippines), and German civil law (Korea and Taiwan). LLSV (1998) suggest that the overall level of investor protection is higher among common law countries than civil law countries. Table 1 shows that the Reserve, legal origin binary variables (En_law, Fr_law), Anti-director index, and Creditor rights variables are highly correlated.

Instead of using all five variables that will introduce multicollinearity into the system of equations, I use principal component analysis to derive a smaller set of uncorrelated variables that contains most of the legal protection information from the full set.¹⁷ Table 2 presents the principal component analysis results. Panel A shows that the first component (Prin1) accounts for 54.7% of the total variability and has large positive factor loadings on English law dummy, anti-director index, and creditor rights. Prin1 seems to be a measure of overall legal protection of minority shareholders and creditors. Table 2 panel B shows that English law countries and German law countries take on highest and lowest values, respectively, in Prin1. The second component (Prin2) has a large positive factor loading on the French civil law binary variable and a large negative factor loading on reserve. The only two French civil law countries in the sample have zero reserve requirements. Therefore, sample firms from those two countries would have

¹⁷ Caution should be taken in interpreting the principal component results. In the context of biological studies, Pearce (1965) suggests that any hypothesis developed using principal component analysis that seems plausible can only be considered subjective until confirmed by existing biological knowledge or additional studies.

largest Prin2 values. For countries with German or English law origins, high reserve requirements result in low Prin2 value. Prin3 has a large positive loading on creditor rights and a large negative loading on anti-director index. Hence, Prin3 is high in countries where creditor rights have relatively higher priority as compared with shareholder protection. German law countries and French law countries take on highest and lowest values in Prin3 respectively. The first three components collectively account for 92.8% of the total variability which indicates that these three components contains the majority of the legal variable information. The common practice in principal component analysis is to retain components with eigenvalues greater than 1. Although Prin3's eigenvalue is less than 1, it is still relatively close to 1 and it alone explains 12% of total variation. I include the first three principal components in my final analysis.

3.5. Other firm- and country-specific control variables

In all six equations, I use the natural log of total assets (Size) to control for the size effect. Previous studies find that firm size is an important determinant of firm policies. Extant literature suggests that the presence of blockholders may increase monitoring on the controlling owner or management, which in turn affects firm performance. Hence, I use a blockholder binary variable (Block) to control for the effect of block ownership. Block is set equal to 1 if there exists a second largest owner with at least 10% voting rights. The presence of other large shareholders may either alleviate the expropriation problem (if they monitor the controlling shareholder) or exacerbate it (if they collude with the controlling shareholder to act against minority shareholders).

I use a binary variable (Group) to indicate if a firm is affiliated with a business group. The controlling owners in Asian business groups maintain their control through

various control-enhancing techniques such as pyramidal structures, cross-holdings, and multiple control chains. The use of these complex ownership arrangements leads to owners having more control rights than their ownership stake, giving them incentives to engage in expropriation activities. In addition, firms affiliated with business groups may suffer more from insiders' self-dealing activities because controlling owners can engage in intra-group transfers which divert wealth from firms they have lower ownership stake to those they have higher ownership stake. Joh (2003) documents that Korean firms that are affiliated with business groups are less profitable relative to independent firms, suggesting more expropriation among group affiliated firms. Faccio, Lang, and Young (2001b) document that dividend payment is related to how tightly a firm is affiliated with a group.

In the Dividend equation, I use the three-year (1998-2000) mean of the ratio of total capital expenditure to net sales (Capex) to account for the effect of investment opportunities on dividend payment. In the diversification equation, I control for the effect of the level of economic development on firm's diversification by including the per capita GDP of an economy (GDP). Claessens, Djankov, Fan, and Lang (2000) document that economic development may have a positive impact on diversification.

In their ownership data, Claessens, Djankov, and Lang (2000) categorize the type of the largest owner as state, family, widely held company, and widely held financial institutions. I conjecture that the incentive for an individual or his family to diversify their firm-specific risk is stronger relative to other owner types, *ceteris paribus*. Therefore, I include a binary variable (Family) indicating whether the largest owner is an individual or a family.

In the leverage equation, I control for the effects of asset tangibility (Tangible) and non-debt tax shield (NDT) on leverage. All else equal, the proportion of tangible assets increases debt capacity. Non-debt tax shield substitutes for the tax benefits of debt. Hence, I expect a negative relationship between NDT and leverage. Tangible is measured as the natural log of the ratio of fixed assets to total assets. NDT is computed as the ratio of depreciation and amortization expenses over total assets. In the Accruals equation, I control for the impact of earnings volatility (Vol) on accruals. All else equal, firms with more volatile earnings may use higher accruals to smooth their earnings. Vol is calculated as the standard deviation of earnings for firms with at least five-years of historical data. In the market-to-book equation, I use the 3-year (1998-2000) average growth rate in sales (Grow) to account for the effect of growth opportunities on firm value. I expect high growth firms to receive high valuation.

3.6. Model and descriptive statistics

The six-equation model described above is summarized as follows. In all equations, I control for industry effects with ten-industry binary variables (Industry1-10) using Campbell's (1996) industry classification.¹⁸

Policy Group Equations:

Dividends = f1(Own, Excess, Ex_c, leverage, diversification, accruals,

CFTA, size, Capex, block, group, Prin1, Prin2, Prin3, Industry1-10)

(1)

¹⁸ Campbell (1996) industry classification is 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).

$$\text{Diversification} = f2(\text{Own, Excess, Ex_c, leverage, dividends, accruals, CFTA, size, GDP, block, group, Family, Prin1, Prin2, Prin3, Industry1-10}) \quad (2)$$

$$\text{Leverage} = f3(\text{Own, Excess, Ex_c, dividends, diversification, accruals, CFTA, size, Tangible, NDT, block, group, Prin1, Prin2, Prin3, Industry1-10}) \quad (3)$$

$$\text{Accruals} = f4(\text{Own, Excess, Ex_c, dividends, leverage, diversification, CFTA, size, vol, block, group, Prin1, Prin2, Prin3, Industry1-10}) \quad (4)$$

Performance Group Equations:

$$\text{CFTA} = f5(\text{Own, Excess, Ex_c, diversification, size, block, group, Prin1, Prin2, Prin3, Industry1-10}) \quad (5)$$

$$\text{Market-to-book} = f6(\text{Own, Excess, Ex_c, dividends, diversification, leverage, accruals, CFTA, size, grow, block, group, Prin1, Prin2, Prin3, Industry1-10}) \quad (6)$$

A summary of variable names and definitions is given in Table 3.

Table 4, Panels A [B] present the overall mean [median] and mean [median] by country of all the variables used in the model. The largest owner on average has 30% of control rights and owns 25% equity. On average, the largest owner has 4.6% excess control rights. There is a large variation in excess control---63% of firms in the sample have no excess control, the maximum excess control held by the controlling owner is 35%. At this high end of divergence between control and cash flow rights, the controlling owner has a strong incentive and enough clout to expropriate minority shareholders. In addition, the majority of firms are family-controlled. Nearly half of the sample firms have

a blockholder in their ownership structure and 42% of the firms are affiliated with business groups.

Across countries, there is substantial in-sample variation in ownership structure. The average control rights [cash flow rights] held by the largest owner varies from 21%[18%] in Korea to 38%[36%] in Thailand. Given the highest ownership concentration, the Thai firms have the smallest average excess control on average. Overall, these East Asian firms exhibit high ownership concentration, coupled with family control and/or group affiliation, suggesting that the controlling owner and minority owner conflict might be severe.

4. Empirical results

Table 5 gives the structural form results for the three-stage least squares (3SLS) estimation of the simultaneous equations model. Some of the industry binary variables are statistically significant in various equations, suggesting the presence of industry effects (the industry coefficients are not shown). Estimation results for each equation are discussed below in the order of control variables, policy variables, and ownership structure variables.

4.1. Dividends

The positive coefficient on Size implies that large firms tend to pay more dividends. Large firms may be mature firms in their industry and have proportionally fewer growth opportunities than small firms. Therefore, they are likely to retain proportionally less cash for new investments. The coefficient on capital expenditure ratio (Capex) is not statistically significant. The insignificant coefficient on Block suggests that the presence of a second large shareholder has no significant effect on dividend

policy.¹⁹ The negative coefficient on group affiliation dummy (Group) suggests that firms that have ties with business groups tend to pay lower dividends to outsiders. Table 2 shows that English law countries have highest Prin1 values. LLSV (1998) report that English law countries offer the strongest overall investor protection. The positive coefficient on Prin1 is consistent with the findings of LLSV (2000) that countries with good investor protection tend to make higher dividends payment. Prin3 is a contrast between creditor rights and shareholder rights. Countries with high Prin3 value favor creditor over shareholder. Prin3 has an expected sign, suggesting that all else equal, strong creditor protection coupled with weak shareholder protection results in lower dividends, however it is not statistically significant.

Leverage and Accruals are strongly significant (p value <.0001) while Diversification is close to 10% significance, suggesting that these policies are related to firms' dividend policy. Firms that are more diversified pay lower dividends, consistent with the view that more resources have to be used to acquire new assets. The negative relationship between Dividend and Leverage suggests that they might be substitutes as bonding mechanisms. Dividend payments remove free cash flows that are at discretion of the controlling shareholders. High leverage has a similar effect since the firm is committed to make fixed interest payments. Dividend payment is positively related to Accruals. One possible explanation may be that firms that are more aggressively managing earnings also use high dividends to mitigate outsiders' concern about being

¹⁹ The blockholder binary variable is set to 1 if there exists a second largest owner having at least 10% control rights. Claessens, Djankov, and Lang (2000) data does not have information of the cash flow rights held by the second largest owner. With missing information on the cash flow rights of the blockholder, I am unable to draw definitive conclusion with respect to the blockholder's incentive to either collude with the largest shareholder (exacerbate expropriation) or increase monitoring on the largest shareholder (alleviate expropriation).

expropriated. It is also possible that the income-smoothing accruals may facilitate high dividend payments. The positive coefficient on CFTA is consistent with the view that firms with higher efficiency make higher dividend payments, all else equal, although it is not statistically significant.

Own has a significant positive coefficient, consistent with the positive alignment effect of high ownership concentration. The positive coefficient on Excess is consistent with the view that dividend policy is used as a bonding device to mitigate outsiders' concern for expropriation. The negative but insignificant coefficient on Ex_c provides some weak evidence of nonlinear ownership effect, i.e., the impact of excess control diminishes as the largest owner achieves de facto control since any increase in control rights does not further entrench the controlling shareholder. Whether rational investors factor in the signaling effect of high dividends payment in their valuation will be addressed in the market-to-book equation.

4.2. Diversification

As expected, since larger firms are generally more diversified, firm size (Size) has a positive coefficient. The economic development of a country as proxied by GDP per capita does not have an impact on diversification. The three binary variables Block, Group, and Family have no significant effect on diversification. The positive coefficients on Prin1 imply that countries with good investor protection have more diversified business operations. These countries generally have active markets for corporate control via mergers and acquisition which may also results in more diversified business. Prin2 takes on large values for countries with French civil law origin and low reserve requirement. LLSV (1998) document that French law countries offer the weakest investor

protection. Hence, the positive relationship between Prin1, Prin2 and Diversification implies that legal protection alone may not be the important factor of firm diversification.

Leverage is negatively related to Diversification, although only marginally significant. The negative relation between operating efficiency and Diversification will be further addressed in the CFTA equation.

Own and Excess are positively related to Diversification, although only significant at 10% level, consistent with both the risk reduction and expropriation hypotheses.

4.3. Leverage

Firm size is positively related to Leverage, implying that large firms have higher debt capacity. The asset tangibility (Tangible) and non-debt tax shield (NDT) do not significantly impact leverage. Leverage of firms having blockholders is no different from that of firms without blockholders. Group affiliation (Group) is negatively related to Leverage. Prin1 and Prin2 are positively related to leverage.

Consistent with the results of equations 1 and 2, Dividends and Diversification are negatively related to Leverage. Dividends and Leverage may act as substitute bonding devices. Diversification creates an internal capital market which reduces the dependence on external borrowing. Leverage is positively related to Accruals. One possibility is that controlling shareholders may use earnings management to increase debt capacity or to ensure compliance with debt contract provisions. The relation between operating efficiency and leverage is insignificant.

The positive relationship between Own (Excess) and Leverage is consistent with both the signaling and the expropriation hypotheses. The signaling hypothesis implies

that the controlling owner commits himself to make future cash flow payment to creditors, mitigating agency costs of free cash flow. The expropriation hypothesis says that controlling shareholders use high leverage to enhance control and thereby facilitate expropriation [see Faccio, Lang, and Young (2001a)].

4.4. Accruals

The negative coefficient on Size suggests that larger firms have lower accruals. Earnings volatility (Vol) has the predicted sign but is not statistically significant. Block has an insignificant positive effect on Accruals. Group affiliated firms are more engaged in earnings management consistent with the view that expropriation is more pervasive in group affiliated firms. Prin1 is negatively related to Accruals, supporting the findings of Leuz et al. (2003) that countries with good investor protection are less likely to manipulate earnings.

Dividends and Leverage are positively related to Accruals. Suppose controlling shareholders attempt to use large dividend payment to offset outsiders' fear for expropriation, they may simultaneously engage in other less observable self-dealing activities for private gains and manipulate earnings to prevent the detection of these behaviors. Highly levered firms are more subject to accounting-based constraints that motivate controlling shareholders to aggressively manage earnings.

The negative relationship between Own and Accruals is consistent with the alignment effect hypothesis. It seems to be counterintuitive that Excess is also negatively related to Accruals, given that excess control implies strong incentives for expropriation.

4.5. CFTA

The positive sign on Size suggests that larger firms operate more efficiently. Block and Group have no significant relationship with firm efficiency. The positive coefficient on Prin1 suggests that firms in countries with good investor protection have relatively high operating efficiency. The positive coefficient on Prin2 indicates that French civil law countries and those with low reserve requirements are more operationally efficient. This shows that poor investor protection does not necessarily result in poor operating performance.²⁰

The negative coefficient on Diversification implies that over-diversification causes inefficiency, consistent with the hypothesis that diversification is used to increase private benefits.

The positive coefficient on Own supports the alignment effect hypothesis. The positive effect of Excess is consistent with Grossman and Hart's (1980) contention that there are monitoring benefits from large shareholders. Controlling shareholders may be motivated to run firms efficiently so that they have more resources to divert to themselves. Minority shareholders face the tradeoff between expropriation costs and gains from monitoring.

Given that CFTA is computed excluding interest charges, leverage would have a negative effect on operating efficiency, *ceteris paribus*. As a robustness check, I include leverage as a control variable in CFTA equation and rerun the modified simultaneous equations model. The results (not reported here) are very similar to those reported in

²⁰ LLSV (1998) suggest that the overall level of investor protection is worst among French civil law countries and best among English common law countries.

Table 5. The noticeable differences are: in the dividends equation (1), CFTA has a positive and strongly significant coefficient. The coefficient on CFTA was positive in the original specification, but not statistically significant. Excess is only significant at 10% level; in the diversification equation (2), excess is no longer significant; in the accruals equation (4), CFTA has a significant negative coefficient, suggesting low performance firms are more likely to suffer from earnings management problem; in the CFTA equation (5), excess is only marginally significant at 10% level. As expected, leverage has a negative effect on CFTA, that is, all else equal, high interest payments reduce CFTA since it is computed after interest payments.

4.6. Market-to-book ratio of assets (MB)

Growth opportunity (Grow) is positively related to MB, although only marginally significant. Larger firms receive higher value. Although some of the East Asian economies have well developed financial markets, e.g., Hong Kong and Taiwan, the overall level of capital market development in this region is lacking relative to the US and developed countries in Europe. The investors may view large firms more positively due to the advantages of an internal capital market and reputation effects. In addition, large firms have more analysts following and have less information asymmetry relative to small firms. Firm size may be a proxy for these factors. Block has no significant relation with MB. Group affiliated firms receive lower valuation relative to independent firms, implying that investors are more alert to expropriation among group affiliated firms and discount MB accordingly. The positive coefficient on Prin1 provides additional evidence of benefits of legal protection of investors. The negative coefficient on Prin3 shows that

poor shareholder protection and/or strong creditor protection lead to low MB. It appears that the dominance of creditor interests over those of shareholders hurts firm valuation.

According to the signaling hypothesis, high dividend payments and/or high leverage signal outsiders that they are less likely to be expropriated. Therefore, these two policies should be positively related to MB. It is also known that mature firms tend to have high dividends yield and high leverage ratio. If investors perceive firms with large dividends payment and/or leverage as signs of lack of growth opportunity, then they will assign low market value to these firms. Therefore, we expect a negative relationship between market-to-book ratio and dividends/leverage. In the Accruals and CFTA equations, Excess is negatively related to Accruals and positively related to CFTA. Excess has been used as a proxy for the potential for expropriation [see Claessens, Djankov, Fan, and Lang (2002)]. The results suggest that excess control increases efficiency, which may reduce the need for earnings management. The positive coefficient on Accruals in MB equation suggests that investors do not discount firm value for more aggressive earnings management. Diversification has a negative but insignificant impact on MB. This suggests that investors do not consider or may not be aware that diversification is a means for expropriation. As expected, CFTA is positively related to MB.

The positive coefficient on Own is consistent with the positive alignment effect hypothesis. The switch of signs on Excess and Ex_c indicates the existence of nonlinear effect of excess control. At low levels of control, Excess has a direct positive impact of MB. However, this effect reverses when the largest owner has control rights above the

sample median, suggesting the expropriation problem is more severe at high levels of control.

4.7. Summary

The regression results indicate that cash flow rights (Own) and excess control rights (Excess) have direct effects on firms' financial and operating policies as well as on firm performance. Specifically, the positive effects of Own on Dividend, CFTA, and MB, and the negative effect of Own on Accruals are consistent with positive alignment effects of concentrated ownership. The interaction term Ex_c is used to delineate the nonlinear effects of ownership. At low levels of control, Excess is positively related to Dividend, consistent with the view that insiders use high dividend payment to mitigate minority shareholders' concern about being expropriated [see Faccio, Lang, and Young (2001b)]. The positive relation between Excess and Leverage supports both the expropriation hypothesis, which contends that controlling owners use leverage to enhance control and thereby facilitate their expropriation activities, as well as the bonding hypothesis, i.e., controlling owners can voluntarily use leverage as a bonding device to mitigate outsiders' fear for expropriation. The positive effect of Excess on CFTA and MB implies that the presence of large shareholders is beneficial to minority shareholders despite the potential expropriation by controlling owners. There is some weak evidence indicating that the controlling owners use more diversification if their cash flow and /or excess control rights are higher, This is consistent with the risk reduction hypothesis, i.e., they are more likely to diversify firm business when they have high ownership stake. It is also consistent with the expropriation hypothesis which states that diversification is used for expropriation purposes even if they have low ownership stake (large excess control).

The coefficient estimates on Ex_c have the opposite signs of those on $Excess$ in all six equations, indicating the existence of nonlinear effect of excess. The sum of coefficients on $Excess$ and Ex_c is the entire effect of excess control for firms with high levels of control. Ex_c is negatively related to Dividends, Diversification, Leverage, and MB, suggesting that, when control levels are high, with increasing excess control, (1) insiders are less likely to pay more dividends, indicating more expropriation; (2) they are less likely to diversify; (3) they use lower leverage; (4) the positive monitoring effect of controlling owner is diminishing; (5) minority investors discount firm value.

The principal component analysis introduces three uncorrelated variables containing the majority of investor protection information into the system. $Prin1$ is a measure of overall level of investor protection. The positive effects of $Prin1$ on Dividends, CFTA, and firm value are consistent with the view that strong investor protection is beneficial to minority shareholders. The negative effect of $Prin1$ on Accrual is consistent with the findings of Leuz et al. (2003), suggesting that insiders are less engaged in earnings management if the country offers better investor protection. $Prin2$ is mainly a contrast between French law and German law countries. The positive effects of $Prin2$ on Diversification and Leverage imply that French law countries use more diversification and leverage relative to their German peers, all else equal. Interestingly, $Prin2$ also has a positive effect on CFTA. Hence, countries with poor investor protection do not necessarily have inefficient business operations, although the insignificance of $Prin2$ in the MB equation suggests that the efficiency gains are captured by controlling shareholders.

4.8. Net effects of Own and Excess

The structural form estimates discussed above present both the policy effect and the direct ownership effect for each equation. Table 5 Panel C presents the net effect of Own and Excess on policy and performance variables. Using reduced form coefficients estimates, I compute the change of the estimated values for each of the endogenous variables for a 5% change in Own or Excess. For the whole sample, a 5% increase in Own has positive effects on Dividends, CFTA, and MB, and negative effects on Diversification, Leverage, and Accrual. These results are consistent with the alignment effect of cash flow rights (Own), i.e., high ownership aligns insiders' interest with those of minority shareholders and thereby increases dividends payment, enhances efficiency, and increases MB, while reducing inefficient diversification, decreasing leverage and accruals.

For the whole sample, a 5% increase in Excess has similar effects as the increase in Own except for Diversification. Excess has been hypothesized to increase controlling shareholders' incentive to expropriate outsiders. The positive effects of Excess on CFTA and MB suggest that the benefits associated with concentrated ownership outweigh the potential expropriation costs.

All else equal, I expect that the controlling shareholders have more opportunities to expropriate minority shareholders if they have de facto control. Therefore, I divide the sample into two subsets: (1) low control firms which have largest owners with control rights below the sample median (30%) and (2) high control firms which have largest owners with control rights above the sample median. A 5% change in Own has similar effects on firm policies and performance for both the low control and high control firms.

Noticeably the positive effects on Dividends and CFTA are much smaller for high control firms, a 5% increase in Own increase Dividends by 15.4% (8.9%) and CFTA by 20.6% (11.7%) for low(high) control firms.

The effect of a 5% change in Excess has quite different impact: the positive effects on Dividends, CFTA, and MB are much smaller for the high control firms. The increase in Excess reduces Accruals by a larger extent for low control firms than for high control firms. The increase in Excess increases Diversification and decreases Leverage for low control firms but decreases Diversification and increases Leverage for high control firms.

Taken together, the results suggest that the expropriation problem is more severe for high control firms. The controlling owners with de facto control are more likely to use leverage and earnings management for expropriation purposes. The efficiency gain attributable to the presence of large shareholders is diminishing with the increase in control by the largest owner, implying expropriation costs are increasing or the monitoring benefits are diminishing.²¹

5. Specification and robustness checks

The recent Asian corporate governance studies generally adopt Ordinary Least Squares regression (OLS) approach [see Claessens, Djankov, Fan, and Lang (2000, 2002), Faccio, Lang, and Young (2001 a, b), Fan and Wong (2002)].²² As a robustness check, I run six equations separately using the OLS approach. Table 6 reports the regression results. Compared with the 3sls results in table 5, the ownership variables are

²¹ In their Asian ownership data, Claessens, Djankov, and Lang (2000) document that there is often no separation between management and the controlling owner.

²² Claessens, Djankov, Fan, and Lang (2002) uses a random effect model. Fan and Wong (2002) run fixed effect model using panel datasets.

less significant in OLS models. The coefficients on some policy variables have opposite signs depending on the estimation techniques.

I conduct the Hausman endogeneity test [see Hausman (1978)]. The test results indicate that the policy and performance variables are endogenous to the system. The 3sls approach accounts for the interdependencies among firm policies and their joint impact on firm value while the OLS approach ignores them. The single OLS model approach in previous studies may suffer from simultaneous equation bias.

Faccio et al. (2001b) report that the dividend ratio is related to Excess control and the “tightness” of group affiliation dictates this relationship. To replicate their results, I create a group affiliation dummy using their definition and an interaction term between group and excess control.²³ Instead of using Own, Excess, Ex_c, I use Own, Excess, Ex_gp (the interaction term of Excess and Group dummy) and rerun the simultaneous equation model.²⁴ I also identify firms that are tightly or loosely affiliated with business groups using their definition and rerun my model. The results (not reported here) are very similar to those reported in Table 5.

As an additional robustness check, I use 2-stage least square estimation method to estimate the model. The coefficient estimates almost always have the same signs as those reported in Table 5. However, 3 stage least square estimation has more significant estimates due to the smaller standard errors. Lastly, I run the specification in Table 5 using only the first two principal components. The signs and significance of variables are essentially unchanged.

²³ Due to data unavailability, my group definition only closely resembles their definition.

²⁴ I also leave out the group dummy by itself.

6. Conclusion

Given high ownership concentration and disparity of control and cash flow rights, the primary agency problems afflicting East Asian firms are the conflict between controlling shareholders and minority shareholders. Using a simultaneous equations model approach, I find that the cash flow rights held by controlling shareholders are positively related to dividend payment, CFTA, and market-to-book, consistent with the findings of LLSV (2000, 2002) and Joh (2003). Dividends and excess control are positively related, consistent with the view that insiders use high dividend payment to alleviate minority shareholders' concern about expropriation. The positive relation between leverage and excess control supports either the expropriation hypothesis or the bonding hypothesis. The ownership effect on diversification is marginally significant and supports both the risk reduction hypothesis and the expropriation hypothesis.

The reverse of signs on excess control at high control levels indicates the existence of a nonlinear control effect. At low levels of control, excess control improves operating performance and firm valuation, suggesting that increased monitoring from large shareholders are beneficial to minority shareholders [see Grossman and Hart (1980), Shleifer and Vishny (1986)]. As the level of control rights held by the largest owner increases, the monitoring benefits seem to diminish. There is some indirect evidence suggesting a diversification discount---diversification has a direct negative effect on CFTA that is positively related to the market-to-book ratio although diversification by itself only has an insignificant effect on the market-to-book ratio.²⁵

²⁵ Recall that, according to Villalonga (2004), the number of industry segments in a firm is not a perfect measure of diversification because it tends to reflect only conglomerate diversification.

Firms affiliated with business groups are more prone to expropriation problems and thereby receive lower valuation. Results for the components reflecting legal system features suggest that firms in countries with better shareholder protection pay higher dividends, are less engaged in earnings management, and receive higher valuation.

Appendices

Appendix A: An Example of Expropriation

This example demonstrates how controlling shareholders use combinations of corporate policies to expropriate minority shareholders. Suppose a family group AB (hereafter AB) owns 20% of the stock of company B, has 20% voting rights. Further, assuming AB has de facto control of B's corporate policies. AB also owns 100% of firm A.

Suppose B has 20 million dollars in cash. AB makes decisions about the use of B's cash [see Exhibit 1 B's balance sheet]. Consider three cases (there are an infinite number of combinations). In Case 1, AB let B pay out 10 million dollars cash dividends to shareholders. This leads to higher dividend payments and an increase in leverage. AB receives its share of dividends ($\$10 * 20\% = 2$ million). Assuming dividend payout is a wealth neutral event, AB and B's wealth are not affected. In Case 2, AB instructs B to acquire company A which is 100% owned by AB at 30 million dollars while the fair market value is only 25 million. To complete this acquisition, B has to forgo dividend payments. In addition, B has to borrow 10 million dollars. This leads to an increase in B's leverage from original 0.3 to 0.36. Through this transaction, AB gains for its share (100%) on the \$5 million dollar premium and shares the loss of 20% for the premium price paid by B. Therefore the net gain to AB is $(\$5 * 100\% - \$5 * 20\%) = \$4$ million. B's minority shareholders share a loss of 4 million dollars. In case 3, B may use the cash to reduce its debt by 10 million, decreasing B's leverage from 0.3 to 0.13. Suppose the original leverage was too high for B, the activity to lower leverage may have a positive impact on B's market value. Arbitrarily I assign a value of 3 million to the increase in B's market value, AB shares 20% of the increase in value, therefore the net gain to AB is

0.6 million dollars while B's minority shareholders share an increase in wealth of 2.4 million dollars. Clearly, case 2 allows AB to extract all cash out of B and realize the largest gain.

In addition, AB may have incentives to manipulate earnings of B to disguise his expropriation activities.²⁶ The expropriation is detrimental to B's performance. In Case 2, B's diversification increases which also affect dividend and leverage policies as well as minority shareholders' wealth.

Suppose we change the cash flow stake of AB in B to 5%. Assuming AB still has de facto control (20% voting rights). Now the expropriation cost to AB is smaller due to lower ownership stake. Therefore the private benefits to AB are larger. Therefore, for a given level of control, the larger the divergence between control and cash flow rights, the stronger the incentive the controlling shareholder has to engage in expropriation activities. The three cases illustrate the interdependencies among financial policies. A simultaneous equation model accounts for these interactions and considers these policies and firm performance as endogenous to the entire system.

²⁶ Even if rational minority shareholders expect such appropriation and if the market has discounted the firm's share value accordingly, controlling shareholders may desire to obscure the expropriation activity from legal or regulatory scrutiny.

Appendix A Exhibit 1: B's Balance Sheet in Three Cases including Original State

Assets	Original State	Case 1	Case 2	Case 3
Cash	20	10	0	0
Asset	0	0	30	0
Other Assets	80	80	80	80
Total Assets	100	90	110	80
Liabilities and Equity				
Total Debt	30	30	40	10
Common Equity	50	50	50	50
Retained Earnings	20	10	20	20
Total Liabilities and Equity	100	90	110	80
Leverage (debt/total assets)	0.30	0.33	0.36	0.13
Dividends		2	0	0
Shared gains/losses in market value of B's equity		-2	-1	0.6
Gains from expropriation		0	5	0
Wealth change in AB		0	4	0.6
Wealth change to minority shareholders in B		0	-4	2.4

Appendix B: Summary of Hypotheses

Dividends

- Controlling shareholders retain dividends for expropriation purposes
- Controlling shareholders use dividends as a bonding device to signal outsiders that no expropriation will take place

Diversification

- Controlling shareholders use diversification to create an internal capital market which is more cost effective than external capital markets
- Controlling shareholders use diversification to reduce their firm-specific risks
- Controlling shareholders use diversification to facilitate expropriation

Leverage

- Controlling shareholders use leverage to enhance control and thereby facilitate expropriation
- Controlling shareholders use leverage as a bonding device to signal outsiders that no expropriation will take place

Earnings management

- Controlling shareholders manipulate earnings to facilitate expropriation
- Efficiency gains mitigate the desire to use earnings management to obscure poor performance

Operating efficiency

- Controlling shareholders enhance efficiency through increased monitoring and direct participation in firm decision-making process
- Controlling shareholders destroy efficiency by engaging in self-dealing transactions

Firm value

- Firms with concentrated ownership structure receive high valuation (efficiency gain is greater than expropriation costs)
- Firms with concentrated ownership structure receive low valuation (efficiency gain is less than expropriation costs)

Appendix C: Calculation of Accruals

Accrual measure used in this paper is computed as follows:²⁷

$$Accrual_i = \frac{1}{3} \sum_{t=1}^3 \left| \frac{T_Accrual_{it}}{assets_{it}} - M_accrual_i \right|$$

M_accrual is the mean ratio of total accruals to total assets over 1992~1996.

Following Dechow et al. (1995 p 203), I compute the total accruals (T_Accruals) as follows:

$$T_Accruals_{it} = (\Delta CA_{it} - \Delta Cash_{it}) - (\Delta CL_{it} - \Delta STDebt_{it}) - Depr_{it}$$

Where

ΔCA_{it} is the change in total current assets;

$\Delta Cash_{it}$ is the change in cash/cash equivalents;

ΔCL_{it} is the change in total current liabilities;

$\Delta STDebt_{it}$ is the change in short-term debt included in current liabilities;

$Depr_{it}$ is depreciation and amortization expense;

²⁷ For Asian firms I use 1998~2000 data and for European firms I use the following 3-year data after the ownership data is assembled.

Appendix D: Tables

Table 1: Pearson Correlation Coefficient Matrix (Asian Firms).

This table presents the Pearson Correlation among country level legal variables for a sample of 927 listed firms from eight East Asia economies including Hong Kong, Indonesia, South Korea, Malaysia, the Philippines, Singapore, Taiwan, and Thailand. Hong Kong, Malaysia, Singapore, and Thailand have English law origin. Indonesia and Philippines have French civil law origin. Korea and Taiwan have German law origin. I include two binary variables indicating either English law (En_law) or French civil law (Fr_law) for each country. The German law country is the numeraire. The legal variables are (1) reserve requirement (2) country's legal origin; (3) Anti-director index; (4) Creditor rights [see LLSV (1998) for detailed definition of each variable].

	reserve	En_law	Fr_law	antidirector	creditor
reserve	1	-0.634 (<.0001)	-0.279 (<.0001)	-0.418 (<.0001)	-0.491 (<.0001)
En_law	-0.634 (<.0001)	1	-0.475 (<.0001)	0.728 (<.0001)	0.566 (<.0001)
Fr_law	-0.279 (<.0001)	-0.475 (<.0001)	1	-0.349 (<.0001)	-0.254 (<.0001)
antidirector	-0.418 (<.0001)	0.728 (<.0001)	-0.349 (<.0001)	1	0.383 (<.0001)
creditor	-0.491 (<.0001)	0.566 (<.0001)	-0.254 (<.0001)	0.383 (<.0001)	1

Table 2: Principal Component Analysis of Legal Variables (Asian Firms).

This table reports the principal component analysis results for the 927 listed Asian firms. The analysis is performed on the following legal variables including (1) country's legal origin English law (En_law), French civil law (Fr_law) ;(2) Anti-director index; (3) Creditor rights; (4) reserve requirement [data source: LLSV (1998)].

Panel A: Principal Component Analysis

	Eigenvalue	Proportion of Variation Explained	Cumulative of Proportion of Variation Explained
Prin1	2.736	0.547	0.547
Prin2	1.280	0.256	0.803
Prin3	0.622	0.124	0.928
Prin4	0.312	0.062	0.99
Prin5	0.050	0.010	1

Factor Loadings

	Prin1	Prin2	Prin3	Prin4	Prin5
en_law	0.571	-0.063	-0.148	-0.465	0.657
fr_law	-0.254	0.778	-0.127	0.295	0.476
reserve	-0.412	-0.610	0.065	0.360	0.570
antidirector	0.489	-0.112	-0.569	0.643	-0.108
creditor	0.448	0.082	0.796	0.391	0.074

Panel B: Principal Component Scores by Legal Origin***English Law (Hongkong, Malaysia, Singapore, Thailand) [No. of Obs=500]***

Variable	Mean	Stdev	Minimum	Maximum
Prin1	1.443	0.610	0.115	1.951
Prin2	-0.075	0.045	-0.127	-0.031
Prin3	-0.085	0.269	-0.448	0.266

French Law (Indonesia, Philippines) [No. of Obs=150]

Prin1	-1.581	0.627	-2.491	-1.153
Prin2	2.266	0.197	1.980	2.401
Prin3	-0.180	1.696	-2.645	0.980

German Law (Korea, Taiwan) [No. of Obs=277]

Prin1	-1.749	0.306	-2.181	-1.534
Prin2	-1.092	0.523	-1.833	-0.724
Prin3	0.251	0.555	-0.535	0.641

Table 3: Variable Definitions (Asian Firms).

This table gives variable names and definitions. The cash flow rights (Own), control rights (C), excess control (Excess), ownership type (Family), blockholder dummy (Block), group affiliation dummy (Group) are constructed based on the ownership data provided by Claessens, Djankov, and Lang (2000). Principal components are constructed based on LLSV (1998) data [see table 2 for details]. Only the first three components are used in the final regression analysis.

Variable	Definition
C	the largest owner's voting rights (control rights) as a percentage of total outstanding shares
Own	the largest owner's cash flow rights as a percentage of total outstanding shares
Excess	(C - Own), the difference between control and cash flow rights held by the largest owner
Ex_c	the product of Excess and High control binary variable. The high control variable is set to 1 if the largest owner's control rights are above sample median and 0 otherwise.
Dividends	total cash dividends paid divided by total assets using fiscal year ending data
Diversification	number of segment within a firm defined at the 2-digit SIC level
Leverage	the ratio of total debt over total assets. The total debt is the sum of long-term and short-term financial debt.
Accruals	mean absolute deviation of the ratio of total Accruals over total assets.
CFTA	the ratio of cash flow from operations over total assets.
Market-to-book (MB)	the ratio of the sum of total book value of debt and preferred stock plus the market value of common equity over total book value of assets
CapEx	the 3-year (1998-2000) mean ratio of capital expenditure to net sales
GDP	per capita GDP of an economy as of 1999 in US dollars (source: Global Development Finance & World Development Indicators)
NDT	the ratio of depreciation and amortization expenses over total assets
Tangible	the natural log of the ratio of fixed assets total assets
Vol	standard deviation of earnings using historical upto 10-year data. This measured will be computed for firms with at least five-year historical data.

Table 3 continued

Variable	Definition
Grow	the 3-year (1998-2000) average growth rate in sales
Size	the natural log of total assets
Family	a binary variable set to 1 if the largest owner is an individual or a family
Block	set to 1 if a firm has a second largest owner with at least 10% control rights and 0 otherwise
Group	A binary variable indicates whether a firm is affiliated with a business group.
Prin 1 - 3	The first three principal components derived from legal variables used in LLSV (1998). They are reserve, English law dummy, French law dummy, Anti-director index, Creditor rights.

Table 4: Descriptive Statistics (Asian Firms).

This table reports variables descriptive statistics for the region and by country for the 927 listed Asian firms.

Panel A: Overall Mean and Mean by Country

Variable	Overall	Hongkong	Indonesia	Korea	Malaysia	Philippines	Singapore	Taiwan	Thailand
C	0.296	0.329	0.367	0.209	0.317	0.283	0.309	0.225	0.376
Own	0.250	0.284	0.292	0.178	0.262	0.250	0.239	0.184	0.361
Excess	0.046	0.044	0.075	0.030	0.055	0.033	0.070	0.041	0.014
Dividends	0.011	0.020	0.013	0.002	0.014	0.008	0.012	0.008	0.011
Diversification	2.873	3.497	2.569	2.238	3.669	2.354	3.423	2.478	2.050
Leverage	0.377	0.275	0.560	0.477	0.353	0.311	0.260	0.307	0.459
Accruals	0.079	0.080	0.116	0.100	0.082	0.059	0.058	0.042	0.068
CFTA	0.048	0.040	0.090	0.028	0.043	0.053	0.047	0.045	0.064
Market-to-book	0.938	0.932	1.136	0.689	1.027	0.783	0.992	1.149	0.897
CapEx	0.088	0.067	0.091	0.066	0.086	0.194	0.095	0.120	0.071
NDT	0.039	0.037	0.039	0.036	0.034	0.048	0.040	0.032	0.053
Tangible	0.431	0.386	0.420	0.444	0.468	0.510	0.428	0.380	0.466
Vol	0.258	0.274	0.279	0.204	0.397	0.590	0.129	0.101	0.276
Grow	0.084	-0.032	0.357	0.088	0.007	0.145	0.041	0.135	0.068
Family	0.695	0.743	0.745	0.751	0.792	0.521	0.585	0.565	0.663
GDP (in US\$)	9,476	17,845	2,311	10,452	7,039	1,876	18,400	12,845	5,038
Size(in US\$ 000)	822,883	894,342	369,697	1,668,335	492,168	529,053	466,445	826,489	554,004
Block	0.483	0.335	0.539	0.178	0.631	0.583	0.618	0.543	0.850
Group	0.421	0.485	0.686	0.497	0.392	0.688	0.195	0.152	0.313

Table 4 continued

Panel B: Overall Median and Median by Country

Variable	Overall	Hongkong	Indonesia	Korea	Malaysia	Philippines	Singapore	Taiwan	Thailand
C	0.300	0.320	0.335	0.220	0.320	0.280	0.310	0.230	0.360
Own	0.240	0.260	0.260	0.160	0.240	0.235	0.220	0.160	0.355
Excess	0.000	0.000	0.040	0.000	0.000	0.000	0.070	0.000	0.000
Dividends	0.002	0.005	0.001	0.001	0.004	0.000	0.008	0.002	0.000
Diversification	3.000	4.000	2.000	2.000	4.000	2.000	4.000	2.000	2.000
Leverage	0.331	0.210	0.519	0.439	0.263	0.292	0.244	0.315	0.488
Accruals	0.055	0.057	0.090	0.063	0.056	0.048	0.046	0.032	0.053
CFTA	0.046	0.042	0.077	0.036	0.040	0.052	0.045	0.046	0.068
Market-to-book	0.752	0.594	1.009	0.599	0.781	0.623	0.791	0.926	0.836
CapEx	0.048	0.037	0.047	0.043	0.052	0.108	0.061	0.080	0.034
NDT	0.032	0.031	0.033	0.029	0.028	0.045	0.033	0.029	0.048
Tangible	0.423	0.341	0.429	0.467	0.449	0.502	0.416	0.375	0.480
Vol	0.076	0.095	0.119	0.043	0.067	0.121	0.062	0.067	0.106
Grow	0.055	-0.035	0.323	0.073	0.003	0.100	0.011	0.092	0.046
Family	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
GDP (in US\$)	8,745	17,845	2,311	10,452	7,039	1,876	18,400	12,845	5,038
Size(in US\$ 000)	221,324	187,822	110,560	622,321	147,195	182,230	163,893	445,045	138,714
Block	0.000	0.000	1.000	0.000	1.000	1.000	1.000	1.000	1.000
Group	0.000	0.000	1.000	0.000	0.000	1.000	0.000	0.000	0.000
No. of Obs	927	167	102	185	130	48	123	92	80

Table 5: The Simultaneous Equations Regression Results (Asian Firms).

Panel A: Three Stage Least Squares Estimation Results (3sls)

This table gives the three-stage least square estimation results of the six-equation model for the 927 listed Asian firms. ***, **, * represent significance at the 1%, 5%, and 10% level, respectively. System weighted R-Square is 0.34.

Variables	Coeff. Est.	t value	P value
<i>Dividends</i>			
Intercept	-0.017	-1.54	0.1244
Own	0.016	2.31	0.0212 **
Excess	0.054	2.13	0.0335 **
Ex_c	-0.034	-1.41	0.1592
Diversification	-0.005	-1.62	0.1055
Leverage	-0.049	-6.92	<.0001 ***
Accruals	0.180	7.82	<.0001 ***
CFTA	0.031	1.21	0.2256
Capex	0.000	-0.2	0.8427
Size	0.003	3.4	0.0007 ***
Block	-0.002	-1.57	0.1178
Group	-0.003	-2.08	0.0375 **
Prin1	0.003	2.93	0.0035 ***
Prin2	0.002	1.59	0.1113
Prin3	-0.001	-1.3	0.1936
Industry 1-10	included		
<i>Diversification</i>			
Intercept	-0.987	-0.59	0.5538
Own	1.720	1.83	0.0682 *
Excess	5.463	1.77	0.0763 *
Ex_c	-3.656	-1.54	0.1247
Dividends	-53.287	-0.97	0.3337
Leverage	-3.467	-1.73	0.0837 *
Accruals	11.277	1.31	0.189
CFTA	-8.394	-2.08	0.0382 **
Size	0.330	3.42	0.0007 ***
Block	-0.098	-0.47	0.6378

Table 5 continued

Variables	Coeff. Est.	t value	P value
Group	-0.270	-1.33	0.1836
Family	0.093	0.68	0.4951
GDP	0.033	0.06	0.9547
Prin1	0.356	2.25	0.0244 **
Prin2	0.294	2.65	0.0081 ***
Prin3	-0.086	-0.67	0.5012
Industry 1-10	included		
<i>Leverage</i>			
Intercept	-0.239	-0.83	0.4058
Own	0.426	2.93	0.0035 ***
Excess	1.351	2.79	0.0054 ***
Ex_c	-0.892	-1.89	0.0591 *
Dividends	-21.169	-5.35	<.0001 ***
Diversification	-0.182	-2.66	0.0078 ***
Accruals	3.439	4.13	<.0001 ***
CFTA	-0.385	-0.53	0.595
NDT	-0.025	-0.13	0.8965
Tangible	-0.061	-0.51	0.6092
Size	0.069	5.43	<.0001 ***
Block	-0.049	-1.63	0.1044
Group	-0.067	-1.99	0.0469 **
Prin1	0.087	3.68	0.0002 ***
Prin2	0.053	2.43	0.0155 **
Prin3	-0.032	-1.33	0.1827
Industry 1-10	included		
<i>Accruals</i>			
Intercept	0.095	1.68	0.0925 *
Own	-0.098	-2.5	0.0125 **
Excess	-0.309	-2.27	0.0231 **
Ex_c	0.195	1.47	0.1413
Dividends	5.442	8.14	<.0001 ***
Diversification	0.030	1.61	0.1087
Leverage	0.253	5.59	<.0001 ***
CFTA	-0.097	-0.64	0.5229
Size	-0.015	-3.41	0.0007 ***

Table 5 continued

Variables	Coeff. Est.	t value	P value
Vol	0.005	0.54	0.5907
Block	0.012	1.47	0.1423
Group	0.019	2.26	0.0244 **
Prin1	-0.018	-3.03	0.0025 ***
Prin2	-0.009	-1.56	0.1193
Prin3	0.009	1.56	0.1193
Industry 1-10	included		
<i>CFTA</i>			
Intercept	0.005	0.1	0.9202
Own	0.108	3.3	0.001 ***
Excess	0.230	1.93	0.0542 *
Ex_c	-0.145	-1.23	0.2184
Diversification	-0.057	-4.78	<.0001 ***
Size	0.014	5.1	<.0001 ***
Block	0.002	0.22	0.8243
Group	-0.007	-0.94	0.3495
Prin1	0.016	3.56	0.0004 ***
Prin2	0.016	4.48	<.0001 ***
Prin3	-0.003	-0.71	0.4808
Industry 1-10	included		
<i>Market-to-book</i>			
Intercept	-1.371	-2.27	0.0237 **
Own	1.158	2.84	0.0046 ***
Excess	4.563	3.34	0.0009 ***
Ex_c	-3.048	-2.43	0.0151 **
Dividends	-63.255	-4.09	<.0001 ***
Diversification	-0.125	-0.7	0.4819
Leverage	-2.290	-3.81	0.0001 ***
Accruals	17.759	6.98	<.0001 ***
CFTA	7.855	3.97	<.0001 ***
Grow	0.219	1.77	0.0767 *
Size	0.111	2.36	0.0184 **
Block	-0.012	-0.15	0.882
Group	-0.312	-3.51	0.0005 ***

Table 5 continued

Variables	Coeff. Est.	t value	P value
Prin1	0.177	2.93	0.0035 ***
Prin2	-0.076	-1.35	0.1774
Prin3	-0.247	-3.91	<.0001 ***
Industry 1-10	included		

Table 5 continued**Panel B: Signs of the Coefficients Estimates on Endogenous Variables**

This panel reports the signs of the coefficients estimates of the main ownership variables (Own, Excess, Ex_c) in all six equations using 3sls estimation method for the 927 listed Asian firms.

	Dividends	Diversification	Leverage	Accruals	CFTA	MB
Own	+	+, 10% level	+	-	+	+
Excess	+	+, 10% level	+	-	+	+
Ex_c	-, not sig.	-, not sig.	-, 10% level	+, not sig.	-, not sig.	-

Panel C: Net effects of Own and Excess

This table reports the net effect of a 5% change in Own and Excess on firm policy and performance using the reduced form estimates of the simultaneous equations system for the 927 listed Asian firms. The numbers reported are scaled by the predicted values for each endogenous variable. The predicted endogenous value is computed by summing up the product of each exogenous variable's sample mean with their reduced form coefficient estimates.

	Whole sample		Low control firms		High control firms	
	5% increase in Own	5% increase in Excess	5% increase in Own	5% increase in Excess	5% increase in Own	5% increase in Excess
Dividends	0.113	0.162	0.154	0.220	0.089	0.073
Diversification	-0.011	0.021	-0.011	0.021	-0.010	-0.025
Leverage	-0.028	-0.011	-0.026	-0.011	-0.030	0.014
Accruals	-0.029	-0.071	-0.028	-0.070	-0.030	-0.023
CFTA	0.149	0.168	0.206	0.232	0.117	0.139
MB	0.022	0.084	0.023	0.085	0.022	0.045

Table 6: The Ordinary Least Squares Regression Results (Asian Firms).

This table gives the OLS regression results for the 927 listed Asian firms. ***, **, * represent significance at the 1%, 5%, and 10% level, respectively.

Variables	Coeff. Est.	t value	P value
<i>Dividends</i>			
Intercept	0.005	0.58	0.5593
Own	0.008	1.4	0.1632
Excess	0.018	0.81	0.4159
Ex_c	-0.014	-0.68	0.4989
Diversification	-0.001	-1.19	0.2329
Leverage	-0.012	-4.66	<.0001 ***
Accruals	0.041	4.59	<.0001 ***
CFTA	0.103	11.25	<.0001 ***
Capex	-0.011	-1.78	0.0753 *
Size	0.000	-0.27	0.7899
Block	-0.003	-2.62	0.0089 ***
Group	-0.001	-0.41	0.6814
Prin1	0.003	5.37	<.0001 ***
Prin2	0.000	-0.17	0.8635
Prin3	-0.002	-2.59	0.0097 ***
Industry 1-10	included		
<i>Diversification</i>			
Intercept	1.599	1.39	0.1648
Own	-0.359	-1.02	0.3096
Excess	2.316	1.84	0.066 *
Ex_c	-2.584	-2.12	0.0344 **
Dividends	-2.179	-1.13	0.2583
Leverage	-0.338	-2.15	0.0317 **
Accruals	0.274	0.53	0.5982
CFTA	-1.515	-2.68	0.0075 ***
Size	0.125	4.48	<.0001 ***
Block	-0.131	-1.68	0.0937 *
Group	0.049	0.59	0.554
Family	0.133	1.53	0.1253
GDP	-0.063	-0.24	0.8102

Table 6 continued

Variables	Coeff. Est.	t value	P value
Prin1	0.335	9.41	<.0001 ***
Prin2	0.109	1.74	0.0819 *
Prin3	-0.113	-2.32	0.0206 **
Industry 1-10	included		
<i>Leverage</i>			
Intercept	-0.230	-2.17	0.0304 **
Own	-0.038	-0.53	0.5973
Excess	0.006	0.02	0.9829
Ex_c	0.025	0.1	0.9193
Dividends	-1.366	-3.44	0.0006 ***
Diversification	-0.002	-0.24	0.8113
Accruals	0.612	5.64	<.0001 ***
CFTA	-1.634	-14.89	<.0001 ***
NDT	2.166	6.73	<.0001 ***
Tangible	0.120	2.85	0.0045 ***
Size	0.038	6.61	<.0001 ***
Block	0.010	0.63	0.5257
Group	-0.012	-0.76	0.447
Prin1	-0.021	-3.83	0.0001 ***
Prin2	0.058	7.55	<.0001 ***
Prin3	0.081	8.26	<.0001 ***
Industry 1-10	included		
<i>Accruals</i>			
Intercept	0.152	4.77	<.0001 ***
Own	-0.031	-1.4	0.163
Excess	-0.166	-2.11	0.0351 **
Ex_c	0.093	1.2	0.2287
Dividends	0.508	4.2	<.0001 ***
Diversification	0.001	0.32	0.7508
Leverage	0.043	4.29	<.0001 ***
CFTA	-0.250	-6.96	<.0001 ***
Size	-0.007	-3.88	0.0001 ***
Vol	0.027	4.8	<.0001 ***
Block	-0.003	-0.62	0.5383

Table 6 continued

Variables	Coeff. Est.	t value	P value
Group	0.017	3.31	0.001 ***
Prin1	-0.002	-1.06	0.2882
Prin2	0.007	2.74	0.0063 ***
Prin3	0.016	5.15	<.0001 ***
Industry 1-10	included		

CFTA

Intercept	-0.072	-1.86	0.0631 *
Own	0.134	4.96	<.0001 ***
Excess	0.112	1.14	0.2527
Ex_c	-0.012	-0.13	0.8992
Diversification	-0.007	-2.86	0.0043 ***
Size	0.009	4.3	<.0001 ***
Block	0.009	1.59	0.1124
Group	-0.012	-2.02	0.0434 **
Prin1	0.000	-0.18	0.8571
Prin2	0.012	4.04	<.0001 ***
Prin3	0.003	0.95	0.3446
Industry 1-10	included		

Market-to-book(MB)

Intercept	0.680	2.51	0.0121 **
Own	0.074	0.4	0.6903
Excess	0.823	1.23	0.2191
Ex_c	-0.841	-1.29	0.1978
Dividends	9.977	9.67	<.0001 ***
Diversification	0.007	0.38	0.7077
Leverage	0.761	9.13	<.0001 ***
Accruals	1.190	4.27	<.0001 ***
CFTA	0.951	3.05	0.0024 ***

Table 6 continued

Variables	Coeff. Est.	t value	P value
Grow	0.454	4.94	<.0001 ***
Size	-0.049	-3.27	0.0011 ***
Block	0.137	3.41	0.0007 ***
Group	-0.014	-0.34	0.7357
Prin1	0.016	1.07	0.2829
Prin2	-0.088	-4.19	<.0001 ***
Prin3	-0.066	-2.5	0.0125 **
Industry 1-10	included		

**Part III. The Benefits and Costs of Concentrated Ownership of Western
European Firms: A Simultaneous Equations Approach**

1. Introduction

This essay extends the analysis of corporate ownership structure to Western Europe. The review of theoretical and empirical literature relating to ownership structure (see the Introduction to Essay 1) is hereby incorporated. Faccio and Lang (2002) document that listed firms in Western European countries have high ownership concentration. They also document that forty-four percent of 5,232 listed firms are family-controlled.

As in Essay 1, I adopt a simultaneous equations approach to empirically examine (1) whether the controlling shareholder uses a combination of corporate policies to acquire private benefits; (2) the potential tradeoff between efficiency gain and expropriation costs associated with concentrated ownership structure.

Researchers suggest that the European capital market provides better monitoring than the Asian market. This affects the nature of the agency problems between the controlling owners and minority shareholders. For example, in their study of the controlling owners' decision regarding dividend payment, Faccio, Lang, and Young (2001b) find that the excess control rights held by the largest shareholder are positively related to dividend payout for Asian firms but negatively related to dividend payout for European firms. Faccio, Lang, and Young (2001a) document that the excess control rights held by the largest shareholder are positively related to leverage for Asian firms. However, this relationship reverses for European firms. They conclude that the European capital market exerts effective monitoring on corporate insiders, therefore, they use less leverage when the firm's ownership structure signal outsiders that more expropriation

opportunities exist.²⁸ Given these documented differences regarding corporate policy choices by the controlling owners in Europe and Asia, coupled with the anecdotal evidence regarding the effectiveness of capital markets in these two regions, I expect some differences in the relationship between ownership structure and firm policy and performance for my European sample using a simultaneous equations approach.

For a sample of 1,757 listed firms from 13 Western European countries, I find that the policy choices are interrelated and have joint impact on firm performance, specifically, (1) the cash flow rights held by the largest owner has negative effects on leverage and firm value; (2) the excess control rights are negatively related to dividend payment, diversification, leverage, and firm value; (3) principal component analysis reveals that strong investor protection is beneficial to minority shareholders.

The remainder of this essay is organized as follows. Section 2 introduces the simultaneous equations model and sample. Section 3 presents empirical results. Section 4 discusses robustness checks of model specification. Section 5 concludes. Section 6 compares the empirical results of East Asian firms and Western European firms.

2. Methodology and sample

2.1. Model specification

The model consists of two groups of equations: the policy group and the performance group. The policy group consists of equations (numbered parenthetically) for the four jointly determined corporate policies: dividend (1), diversification (2), leverage (3), and earnings management (4). The performance group consists of equations

²⁸ Faccio, Lang, and Young (2001a) suggest that leverage is used by the controlling owner to enhance control and thereby facilitates expropriation.

for firm operating efficiency, using accounting measure return on total assets (CFTA) (5), and a market valuation measure, market-to-book value of assets (MB) (6). Each individual policy variable is regressed against ownership structure variables, other policy variables, and CFTA.²⁹ CFTA is regressed against ownership structure variables, and diversification policy. MB is regressed against ownership structure variables, policy variables, and CFTA. In all six equations, I also control for other firm- and country-specific characteristics.

2.2. Sample

The ownership structure data are taken from Faccio and Lang (2002) which assemble ownership data of 5,232 listed firms (financial and nonfinancial) from 13 Western European countries. Claessens et al. (2002) suggest that the valuation of financial industries and regulated utilities are not comparable to firms in other industries. Hence, I exclude corporations in financial industry (SIC: 6000~6999) and regulated utilities firms (SIC: 4900~4999). I collect annual financial and business segment data for individual firms using the Worldscope database (2003). Then I match firms from these two sources by name.³⁰ I was able to match 1,928 nonfinancial firms (excluding SIC 4900 ~ 4999) by names.³¹ Among these 1,928 firms, 171 firms are recorded as having

²⁹ I include ROA in the policy equations due to the feedback effect of ROA on policy choices. Detailed discussion is in section 3.1.3.

³⁰ When the firm name is very similar but not exactly the same, I use the filing information of Worldscope and check the previous name under which the firm was listed.

³¹ Often times, the names are abbreviated in one source but not the other. Whenever I can not find a match for the firms from the ownership database, I search by the most unique words in the firm name in the Worldscope database. Sometimes, Worldscope indicates the name of the firm has changed and the previous name was the same as the name in the ownership data. Then I consider the firm having the new name as the same one in the ownership database.

zero control rights for the largest owner in Faccio and Lang (2002) data.³² I exclude these firms. My final sample includes 1,757 nonfinancial firms which have all the information required to construct the policy and other firm-specific control variables.

2.3. Ownership and endogenous variables

To disentangle the alignment and entrenchment effect of ownership structure, I include the largest owner's cash flow rights (Own) and the excess control (Excess) that is the difference between the control and cash flow rights in my analysis. In addition, I include an interaction term (Ex_c) which is the product of excess control (Excess) and a binary variable High_c. High_c is set to 1 if the control rights held by the largest owner is above sample median control rights (0.31) and 0 otherwise. Hence, when the control rights held by the largest owner are higher than sample median, the total impact of excess control will be captured by the sum of the coefficients on Excess and Ex_c. Ex_c is intended to capture the nonlinear effect of ownership structure.

To smooth out transitory effects, the endogenous financial variables are constructed using three-year average beginning the year after the ownership data is collected.³³ For France, Germany, Italy, Switzerland, and the UK, the endogenous variables are computed as the mean values of annual accounting data from 1997 through 1999; for Spain and Portugal, the endogenous variables are the mean values of annual accounting data from 1998 through 2000; for Sweden and Norway, the endogenous variables are the mean values of annual accounting data from 1999 through 2001; for

³² Faccio and Lang (2002) could only gather information on control rights when they are equal to or above 5% threshold. Therefore, if the largest owner is recorded as having zero control rights, his actual control might fall between 0 and 5%.

³³ The ownership data collected by Faccio and Lang (2002) are as of 1996 for France, Germany, Italy, Switzerland, and the UK, as of 1997 for Spain and Portugal, as of 1998 for Sweden and Norway, and as of 1999 for Austria, Belgium, Finland, and Ireland.

Austria, Belgium, Finland, and Ireland, the endogenous variables are the mean values of annual accounting data from 2000 through 2002.

Except where explicitly noted, variable definitions are identical to those given in Essay 1, and the structure of the six-equation simultaneous equation model is the same.

2.4. Firm- and country-specific variables

2.4.1. Investor protection measures

The 13 countries included in this study have four different legal origins: English common law, French civil law, German civil law, and Scandinavian civil law. To capture a broad dimension of country level investor protection, I include five legal variables (1) country's legal origin (2) Anti-director index (Antidirector); (3) Creditor rights (Creditor) ; (4) legal enforcement (Enforce); (5) reserve requirement (Reserve). Anti-director index and Creditor rights are shareholder and creditor protection measures respectively. (4) and (5) account for remedial mechanisms.

Table 1 shows that these legal variables are highly correlated. Using all the legal variables in the regression will introduce the multicollinearity problem. To solve this problem, I use principal component analysis to derive a smaller set of uncorrelated variables that contain most of the information from the original data. Table 2 panel A presents the principal component analysis results. The first two principal components have Eigenvalues greater than 1 and the third one has an Eigenvalue close to 1 which suggest that they explain much of the variability of the original legal variables. The fourth component only has an Eigenvalue of 0.53. Therefore, I include the first three components in my final analysis. Prin1 has large positive factor loadings on En_law, Anti-director, Creditor, and Enforce, and negative loadings on Fr_law, Ge_law, and

Reserve. It appears to be a contrast between English law countries with strong investor protection and French/German law countries with weak investor protection [see LLSV(1998) for the comparison of investor protection around the world]. Panel B reports the first three principal component scores by legal origin. These country-specific principal component scores are used in subsequent simultaneous equations model to control for the difference in investor protection across countries. English law countries score highest in Prin1, whereas German and French law countries score the lowest. Prin2 has large positive loadings on Ge_law, Creditor, Enforce, and Reserve, and large negative loadings on Fr_law and Anti-director. It is mainly a contrast between German and French law countries which have highest and lowest Prin2 values respectively. Prin3 has large positive loadings on enforce, reserve, and large negative loadings on creditor and Ge_law. Scandinavian law countries have the strongest legal enforcement, but relatively weak in creditor and shareholder protection. Prin3 is highest for Scandinavian law countries and lowest for German law countries. Panel C reports the first three principal component scores by country along with GDP per capita data and legal origin for each country.

2.4.2. Other firm- and country-specific control variables

In the Dividends equation, I use the three-year mean of the ratio of capital expenditure to net sales (Capex) to account for the effect of investment opportunities on dividend payment. In the diversification equation, I control for the effect of the level of economic development on firm's diversification by including the per capita GDP of an economy (GDP). In Faccio and Lang (2002), the largest owner is identified as family, unlisted company, widely held company, widely held financial institutions, and

miscellaneous including charities, voting trusts, employees, cooperatives, or minority foreign investors. I conjecture that family-controlled firms have stronger incentives to diversify their firm-specific risk, *ceteris paribus*. Using Faccio and Lang (2002) definition, a binary variable Family is set to 1 if the largest owner is an individual, a family, or an unlisted company. Family is used in the Diversification equation. In the leverage equation for the European sample, I use the same firm-specific controls as for the Asian firm sample: asset tangibility (Tangible) and non-debt tax shield (NDT). As with the Asian firm sample, in the Accrual equation, I control for the impact of earnings volatility (Vol) on total accruals. In the market-to-book equation, I use the 3-year average growth rate in sales (Grow) to account for the effect of growth opportunity on firm value. I use the natural log of total assets (Size) to control for the size effect.

2.5. Model and descriptive statistics

The six-equation model is presented as follows. In all equations, I control for industry effects with ten-industry binary variables (Industry1-10) using Campbell's (1996) industry classification.

Policy Group Equations:

Dividends = f1(Own, Excess, Ex_c, leverage, diversification, accruals, CFTA, size,

$$\text{Capex, Prin1, Prin2, Prin3, Industry1-10}) \quad (1)$$

Diversification = f2(Own, Excess, Ex_c, leverage, dividends, accruals, CFTA, size, GDP,

$$\text{Family, Prin1, Prin2, Prin3, Industry1-10}) \quad (2)$$

Leverage = f3(Own, Excess, Ex_c, dividends, diversification, accruals, CFTA, size,

$$\text{Tangible, NDT, Prin1, Prin2, Prin3, Industry1-10}) \quad (3)$$

Accruals = f4(Own, Excess, Ex_c, dividends, leverage, diversification, CFTA, size, vol,

$$\text{Prin1, Prin2, Prin3, Industry1-10)} \quad (4)$$

Performance Group Equations:

$$\text{CFTA} = f5(\text{Own, Excess, Ex_c, diversification, size, Prin1, Prin2, Prin3, Industry1-10}) \quad (5)$$

$$\text{Market-to-book} = f6(\text{Own, Excess, Ex_c, dividends, diversification, leverage, accruals, CFTA, size, grow, Prin1, Prin2, Prin3, Industry1-10}) \quad (6)$$

A summary of variable names and definitions is given in Table 3.

Table 4, Panels A [B] presents the overall mean [median] and mean [median] by country of all the variables used in the model. The largest owner on average has 37% of control rights and owns 33% equity. The disparity between control and cash flow rights (Excess) is relatively small, 4% on average. The ownership concentration is even higher than those East Asian firms [see Claessens, Djankov, and Lang (2000)].

The ownership structure exhibits significant cross-country variations. The largest owners in English law countries (Ireland and the UK) on average have the lowest control rights as compared to those from other legal origins. The excess control held by the largest owner also varies across countries, ranging from 1.2% in France to 13.5% in Switzerland. Firms in English law countries have highest market-to-book ratios.

3. Empirical results

Table 5 gives the structural form results for the three-stage least squares (3SLS) estimation of the simultaneous equations model for 1,757 Western European firms. Some of the industry binary variables are statistically significant in various equations, suggesting the presence of industry effects (the results are not reported here). Sections

3.1. - 3.6. report 3sls estimation results for each equation in the order of control variables, policy variables, and ownership structure variables. Section 3.7 gives the results of principal components analysis. Section 3.8. summarizes main results.

3.1. Dividends

The positive coefficient on Size implies that large firms tend to pay more dividends. Large firms may be mature firms in their industry and have proportionally fewer growth opportunities than small firms. Therefore, they are likely to retain proportionally less cash for new investments. The coefficient on capital expenditure ratio (Capex) is not statistically significant.

Diversification and Leverage are negatively related to dividend payment. Using OLS regression models, researchers document one-to-one relationships between ownership and firm policies, specifically, they suggest that low dividends, more diversification, high leverage facilitate expropriation [see Faccio et al. (2001a,b), Claessens et al. (2000b)]. My finding suggests that these policies can be substitutes to one another, that is, the controlling owner use the best combination of firm policies to maximize his utility and therefore these policies are interdependent. Firms that are more diversified pay lower dividends, suggesting that more resources have to be used to acquire new assets. The negative relationship between Dividend and Leverage can be interpreted as follows: these two policies are substitutes either as bonding mechanisms or as means for expropriation. Accruals has no significant impact on dividend policy. The positive coefficient on CFTA is consistent with the view that more profitable firms pay higher dividends, *ceteris paribus*.

Own has a negative but insignificant coefficient. The excess control (Excess) is negatively related to Dividends, supporting the view that excess control increases the likelihood of expropriation manifested in lower dividend payment. The positive but insignificant coefficient on Ex_c (p-value 0.10) provides some weak evidence of nonlinear ownership effect, i.e., at high levels of control the controlling owner is more likely to use high dividend payments as a bonding device. This finding is similar in nature to the findings of Faccio, Lang, and Young (2001b).³⁴

3.2. Diversification

As expected, larger firms are more diversified. The economic development of a country as proxied by GDP per capita does not have an impact on diversification. Family-controlled firms do not appear to use more diversification.

Consistent with the findings in equation 1, Diversification is negatively related to Dividends. It is also negatively related to Leverage, supporting the hypothesis that firm policies are interdependent. All else equal, high leverage implies that firms have tight cash budget constraints, therefore, they have fewer resources to acquire new investments. Another possibility is that Diversification and Leverage are substitutes as means of expropriation. CFTA has the expected positive sign, that is, more profitable firms could acquire new investments in different product lines, all else equal.

The coefficient on Own is negative but not statistically significant. The excess control (Excess) is negatively related to diversification, although only significant at the 10% level. This finding does not offer any support for the argument that diversification is

³⁴ They find that when outsiders are alert to expropriation problems the controlling owners have to make high dividend payments. They consider firms that are tightly affiliated with business groups are more prone to expropriation problem and document a positive relationship between excess control and dividend payment for tightly affiliated firms.

used to facilitate expropriation. The positive but insignificant coefficient on Ex_c implies that as control reaches sufficiently high levels, the negative effect of excess control on diversification is diminishing.

3.3. Leverage

Firm size is positively related to leverage suggesting that large firms carry more debt on their books. Asset tangibility (Tangible) increases debt capacity, although only significant at 10% level. Non-debt tax shield (NDT) does not appear to be an important factor.

Similar to the findings in dividends equation, Leverage is negatively related to Dividends, however, the significance level is below 10%. Diversification is negatively related to Leverage although only marginally significant. Diversification may have a similar effect as group affiliation, creating an internal capital market which reduces the dependence on external borrowing. CFTA is positively related to Leverage at a 10% significance level. One possible explanation is that more profitable firms are able to borrow more since creditors have confidence in borrowers' ability to repay the debt with future operating cash flows.

The negative relationship between Own and Leverage supports the alignment effect hypothesis, i.e., it becomes more costly to the controlling owner to misuse leverage for expropriation purposes when he holds a large ownership stake. Excess is negatively related to Leverage. As control increases, it appears that the controlling shareholder may use less leverage as evidenced by the positive coefficient on Ex_c, although it is only significant at the 10% level.

3.4. Accruals

The negative relationship between Size and Accruals implies that small firms are more likely to manage earnings. A possible explanation is that large firms have more analysts following and are arguably more transparent than small firms; therefore, insiders refrain from earnings management for fear of public scrutiny. As expected, Vol is positively related to Accruals, i.e., firms with more volatile earnings are more likely to manage their earnings, *ceteris paribus*.

Dividends and Diversification are positively related to Accruals. More profitable firms have higher accruals. Claessens and Fan (2003) point out that although Asian firms with high ownership concentration are more susceptible to expropriation problem by controlling owners, they are not necessarily run badly. Controlling owners also have incentives to improve efficiency in order to generate more resources to divert to themselves. To hide their expropriation actions, they may aggressively manage earnings.

The ownership variables Own, Excess, and Ex_c have no significant direct effects on Accruals. However, as discussed above, ownership structure has indirect effects on Accrual through other policies.

3.5. CFTA

Large firms seem to be just as efficient as small firms. In contrast to the findings of Asian firms [see Essay 1], diversified firms are more efficient. Own, Excess, and Ex_c have no significant direct effects on CFTA, although the signs on these three variables are consistent with the findings of essay 1. In short, there is no statistical evidence of efficiency improvement due to monitoring in these European firms.

3.6. Market-to-book ratio of assets (MB)

Growth opportunity (Grow) does not appear to affect firm value. Similar to the results in essay 1, larger firms receive higher valuation, possibly because investors prefer stock ownership in large and well-established firms. Consistent with the findings of Asian firms, Dividend and Leverage are negatively related to firm value, whereas Accruals and CFTA are positively related to firm value. Given that mature firms tend to pay high dividends and use more leverage and mature firms are perceived to be lack of growth opportunities, these negative relationships may imply that outside investors consider high dividends and leverage as signs of poor growth prospect and therefore assign lower value to these firms. are aware of the fact that Dividends and Leverage are used to facilitate expropriation and therefore discount firm value accordingly. The positive relationship between Accruals and firm value is surprising, in that it suggests that European equity markets reward firms that, *ceteris paribus*, manage earnings. The negative coefficient on Diversification is consistent with a diversification discount.

In contrast with the Asian results, Own and Excess are negatively related to firm value, although the significance level on Own is only marginal. These results suggest that outside investors are wary of expropriation in firms with large excess control held by the controlling shareholder. The positive coefficient on Ex_c implies that the effect of excess control is diminishing at high levels of control.

3.7. Legal system features

As shown in table 2, countries having English law origin, high Anti-director index, high creditor rights, and low reserve requirements have large Prin1 values. Notice that Prin1 has a positive effect on CFTA and a negative effect on Diversification,

suggesting that strong overall investor protection improves firm efficiency and reduces inefficient diversification.

Firms with German legal origin, and/or large reserve requirement and strong creditor protection have high Prin2 values. The negative effect of Prin2 on Dividend suggests that firms in creditor-friendly legal environment may disregard shareholders interests in favor of creditors interests. These results are similar in nature to the findings of LLSV (2000). Prin2 has a negative effect on Diversification, possibly because creditors impose more restrictions on the controlling owner's policy choices (fewer opportunities to misuse diversification). Furthermore, countries with strong creditor protection tend to be conservative in their accounting practice and often use provisions to smooth earnings such as Germany and Japan [see Black and White (2003)]. The positive relationship between Prin2 and Accrual supports this argument. The negative effect of Prin2 on market-to-book ratio implies that the expropriation problem might be more severe in these German law countries and the costs outweigh the efficiency gain, therefore the overall impact is destroying firm value.

Table 2 shows that Scandinavian countries have highest values in Prin3, primarily due to their strong law enforcement. Prin3 is positively related to market-to-book ratio, suggesting that investors value strong law enforcement. Prin3 is also positively related to Leverage. Despite their low creditor protection score, creditors in these countries may be comfortable with firms using more leverage due to strong law enforcement.

3.8. Net effects of Own and Excess

The structural form estimates discussed above present both the (indirect) policy effect and the direct ownership effect for each equation. Table 5 Panel B presents the net

effect of Own and Excess on policy and performance variables. I first compute the predicted values for the policy and performance variables using the sum of the product of the mean values of each exogenous variable and their reduced form coefficient. Then, holding all else constant, I calculate the change of the predicted values for a 5% change in Own or Excess. To explore the potential nonlinear effect of ownership structure, I divide the sample into two subsets: (1) low control firms whose largest owners have control rights below the sample median (30%) and (2) high control firms whose largest owners have control rights above the sample median. Panel B also presents the ratios of a 5% change in Own/Excess over the predicted values for these two subsets.

For the whole sample and the two subsets, a 5% increase in Own has a positive effect on Dividends, and negative effects on other policy variables as well as CFTA and MB. This seems to suggest that cash flow rights are not very effective in aligning the interests of controlling shareholders with those of minority shareholders for these listed European firms.

The effect of the change in Excess depends on the level of controls held by the largest shareholder. For low control firms, an increase in Excess reduces dividends, diversification, leverage, CFTA, and MB, and increases accruals. For high control firms, an increase in Excess reduces dividends and MB, but increases diversification, leverage, accruals, and CFTA. All else equal, the controlling owner is more likely to expropriate minority shareholders at high levels of control. The results support this conjecture: (1) excess control reduces dividends payment by a larger amount at high control levels; (2) the controlling owner uses more diversification at high levels of control; (3) the controlling owner uses more leverage to facilitate expropriation; (4) excess control is

positively related to CFTA but negatively related to MB, suggesting that the controlling owner improves efficiency but divert the majority of the increased wealth to himself instead of sharing it with minority shareholders.

Taken together, the results suggest that the controlling owner is more likely to engage in expropriation activities when he has excess control rights. The policy choices for expropriation purpose are different depending on the levels of control held by the controlling owner. The controlling owner pays lower dividends and simultaneously manage earnings to facilitate expropriation. The controlling owner uses more diversification and leverage only at high levels of control. These actions taken by the controlling owner cause inefficiency at low levels of control, but enhances efficiency at high levels of control. Despite the efficiency gain, the expropriation costs outweigh the efficiency gains; therefore we still observe a negative effect of Excess on MB.

4. Specification and robustness checks

To compare with previous studies results, I run my six equations separately using OLS approach. Table 6 reports the OLS regression results. The signs and significance of the policy and ownership variables are consistent in some equations but not in others. For example, in the market-to-book equation, the estimated coefficients on Excess, Ex_c, Diversification, and Accruals have the same signs and similar significance level using either 3sls or OLS methods. However, the coefficient estimate on Dividend and CFTA switch signs using OLS estimation method. The negative coefficient on CFTA is counter intuitive, suggesting there might be a specification error. I conduct the Hausman endogeneity test [see Hausman (1978)]. The test results indicate that the policy and

performance variables are endogenous to the system. Hence, OLS estimation method suffers from the simultaneous equations bias problem.

For a subset of my sample, I have information regarding whether there exists a second largest owner.³⁵ Extant literature suggests that the presence of blockholders may increase monitoring on the controlling owner or management which in turn affects firm performance. Hence, I use a blockholder binary variable (Block) to control for the effect of block ownership. Block is set equal to 1 if there exists a second largest owner with at least 10% voting rights. Only 1,667 out of 1,757 firms have data for this block variable. Adding this dummy to the original simultaneous equations model does not change the significance and magnitude of coefficient estimates on other variables [results are not reported here].

I also use a country-fixed-effect model as an alternative specification as an additional robustness check. This specification controls for some country-specific factors such as different taxation policies on dividends that might contribute to the differences in policy choices and performance that are unrelated to ownership structure. The results (not reported here) are very similar to those reported in table 5.

I also test whether the owner's type affects his expropriation behavior as manifested in his policy choices. Faccio and Lang (2002) classify the largest owner as family, unlisted company, widely held company, widely held financial institutions, and miscellaneous including charities, voting trusts, employees, cooperatives, or minority foreign investors. Hence, I create a binary variable indicating if a firm is family-controlled (family and unlisted firms), or is controlled by a widely held corporation, or is

³⁵ Faccio and Lang (2002) report this information only for a subset of firms.

controlled by a widely held financial institution. The miscellaneous type is the reference group. I rerun the original specification by adding these binary variables. The results are qualitatively similar to the main results reported here and the binary variables are often not significant.

The extant literature suggests that the dual roles played by a financial institution may have specific implications with respect to agency problems. I also conjecture that state-controlled firms may exhibit different characteristics regarding the agency problems. Therefore, I rerun the model by excluding firms that are controlled by financial institutions (228 observations) or controlled by states (76 observations). The results of the original specification are largely maintained. The excess control becomes less significant in various equations. Through examining the descriptive statistics, I find that the largest owners of state-controlled or financial-institution controlled firms have more excess control rights than firms with other owner types.

5. Conclusions

This study adopts a simultaneous equations approach to examine how concentrated ownership structure affects the nature of the agency problems. For a sample of 1,757 listed firms across 13 Western European countries, I find that the entrenchment effect exists among firms with high ownership concentration. The empirical analysis reveals that the policy choices are simultaneously chosen by the controlling owners. With highly concentrated ownership structure, the controlling owner has the power and incentive to expropriate minority shareholders. The major corporate policies, namely, Dividends, Diversification, Leverage, Accruals, may be substitutes as bonding devices or complimentary means to expropriate minority shareholders. For example, either large

dividend payment or high leverage could be used as signals to outside investors that the controlling owner is committed not to misuse free cash flow. On the other hand, as major financial policies, Accruals, Dividend and Leverage are influenced by firms' operating performance. All else equal, more profitable firms could afford high dividend payments or use less external borrowing. Furthermore, for high performing firms, the insiders feel less urgency to engage in earnings management. These relationships may be distorted when the controlling owner intends to use firm policies to maximize his utility at the expense of minority shareholders. For example, profitable firms may have high accruals because the controlling owner intends to divert firm resources to himself and manage earnings to hide his expropriation activity.

The principal components analysis finds additional evidence supporting the view that legal protection of investors' property rights is an important factor in corporate governance mechanism. Lastly, there is some weak evidence suggesting the existence of nonlinear ownership effects.

6. Comparison of results between East Asia and Western European firms

The East Asia and Western Europe regions exhibit large differences with respect to financial development, culture, and market operations. Faccio, Lang, and Young (2001a) suggest that the European capital markets exert more discipline on firms so that the insiders' expropriation behavior may differ across these two markets. My empirical results for Asian and European firms reveal that the ownership structure has quite different implications in insiders' policy choices. These policy choices in turn affect firm performance. The following discussions are based on the three-stage least squares (3SLS) results reported in table 5 of essays 1 and 2.

6.1. Dividends

Faccio, Lang, and Young (2001b) find that Western European firms on average pay higher dividends than East Asian firms. They use the ratio of cash flow rights to control rights (hereafter O/C ratio) of the largest owner as a proxy for the insider's incentive to expropriate minority shareholders. They assume that the expropriation problems of firms that are tightly affiliated with business groups are more visible to outsiders, *ceteris paribus*. For East Asian firms that have tight group-affiliation, the O/C ratio is negatively related to dividends payment, i.e., if the controlling shareholder has larger excess control rights, the dividend rate will be high. By contrast, for Western European firms that have tight group-affiliation, O/C ratio is positively related to dividends payment, i.e., more excess control implies low dividends payment. Although my specification is different from Faccio, Lang, and Young (2001b), the estimated coefficient on excess control for my Asian and European sample firms are consistent with their findings. For Asian firms, I find that excess control rights are positively related to dividends. However, for European firms, the excess control rights are negatively related to dividends rate. Furthermore, the cash flow rights are positively related to dividend rate only for Asian firms.

6.2. Diversification

Claessens, Djankov, Fan, and Lang (2000) document a positive relationship between excess control held by the largest shareholder and firm level diversification for a sample of East Asian firms. My results for the Asian sample firms support their findings. For example, the excess control is positively related to diversification in equation 2 at the 8% significance level, suggesting that the controlling owners of Asian firms overuse

diversification as a means of expropriation. By contrast, the excess control is negatively related to diversification for the European firms, implying that low divergence between ownership and control rights will result in high diversification. If the controlling shareholder achieves control without resort to control enhancing mechanism (therefore low divergence between his cash flow and voting rights), he bears more firm-specific risk due to his high cash flow stake. Then his incentive is to diversify his firm-specific risk.

6.3. Leverage

Faccio, Lang, and Young (2001a) argue that leverage facilitates expropriation for East Asia and Western European firms. They document regional differences in the controlling owner's choice of leverage which is attributable to the effectiveness of capital market discipline. In their analysis they assume that the capital markets exert more effective discipline in the European market than in the Asian market. My results provide additional evidence supporting their arguments. Specifically, I find that the excess control held by the controlling shareholder is positively related to leverage ratio for East Asia firms. Given ineffective external discipline and easy access to related party loans, the controlling owner misuses leverage to gain control over resources for his private gains. For the European sample, I find that the excess control is negatively related to leverage, i.e., firms that are more vulnerable to expropriation use lower leverage. European firms operate in an environment with better investor protection and more effective external monitoring. Therefore, the controlling owner has less incentive to try to misuse leverage.

6.4. Accruals

I find that the excess control is negatively related to total accruals for East Asian firms, but is positively (only significant at 12% level) related to total accruals for Western European firms. All else equal, I find that East Asian firms with excess control have higher operating efficiency, which mitigates the need to manage earnings, whereas the excess control has no impact on operating efficiency for the European firms.

6.5. CFTA

Joh (2003) documents that the excess control held by the large owners of Korean firms is negatively related to operating efficiency. For the Asian sample of eight economies, I come to a different conclusion. I find that the excess control is positively related to operating efficiency. However, the excess control has no significant impact on CFTA for the European firms, indicating lack of monitoring benefits from large shareholders for these European firms.

6.6. Market-to-book ratio of assets (MB)

Claessens, Djankov, Fan, and Lang (2002) find that the cash flow rights held by the controlling owner is positively related to firm value measured by Tobin's Q while the excess control of the controlling owner is negatively related to firm value. My Asian sample results show that both cash flow rights and excess control rights are positively related to firm value. However, my European sample results show that both the cash flow rights and excess control rights have negative effects on firm value, although the effect of cash flow rights is only marginally significant.

6.7. Summary

Table 7 presents the contrast of the impact of the excess control rights on firm policy and performance for the European firms and the Asian firms. I rerun the Asian model excluding the Block and Group variables given that the European sample does not have sufficient information for these two variables. The excess control has opposite effects on all policy variables and market-to-book ratio for firms from these two regions. For the Asian firms, the excess control rights have a positive effect on operating efficiency (CFTA), suggesting that the alignment effect is operating. However, for the European firms, the excess control rights have a positive but insignificant effect on operating efficiency (CFTA), suggesting no efficiency enhancement attributable to concentrated ownership. The results for the dividends and leverage equations are consistent with the findings of Faccio, Lang, and Young (2001a, b). The excess control is beneficial to Asian firms but detrimental to European firms.

Taken together, the cash flow and excess control rights exhibit positive alignment effect for East Asian firms. For the European firms, these positive effects are largely muted, leaving only the entrenchment effect as being relevant. Perhaps the external monitoring effect is more important in Europe where the capital markets play more important roles in the national economies. Table 8 presents the stock markets' importance in each country's economy as measured by the ratio of total stock market value to national GDP. The stock markets in countries such as Finland, France, Sweden, Switzerland, and United Kingdom are relatively large compared to the size of their national economies. The Asian stock markets in general seem to be less important to their economic development with exceptions for Hong Kong and Malaysia. The more

developed European capital markets potentially constrain the controlling owner's expropriation behavior, as manifested in his utilization of corporate policies. The capital market discipline at least partially substitutes for the internal ownership structure effects noted in the sample of East Asian firms.

The sample European firms have higher ownership concentration than their Asian peers. The mean control [cash flow] rights held by the largest owner is 37% [33%] for European firms versus 30% [25%] for Asian firms. Extant literature documents the existence of nonlinear ownership effect on firm performance [see Morck, Shleifer and Vishny (1986)]. The nonlinear ownership effect might partially explain the different effects of ownership structure on corporate policies and performance across two regions.

In conclusion, the listed firms in East Asia and Western European economies exhibit high ownership concentration. The majority of these firms are controlled by a large shareholder (the controlling owner). The simultaneous equations approach reveals that the controlling owner simultaneously chooses a combination of corporate policies to maximize his private benefits. The ownership structure has both direct and indirect impacts (via firm policies) on firm performance. The presence of a large shareholder enhances operating efficiency for East Asian firms. The European firms do not enjoy the same effect. These differences might be attributable to the difference in the capital market development. Future research may provide additional insights into this matter.

Appendix

Appendix A: Tables

Table 1: Pearson Correlation Coefficient Matrix (European Firms).

This table presents the Pearson Correlation among five country level legal variables for a sample of 1,757 listed firms from 13 Western European economies including Austria, Germany, Switzerland (German law), Belgium, France, Italy, Portugal, Spain (French civil law), Finland, Norway (Scandinavian), Ireland, United Kingdom (English law). The five legal variables are (1) country's legal origin (2) Anti-director index (Antidirector); (3) Creditor rights (Creditor); (4) legal enforcement (Enforce); (5) reserve requirement (Reserve). I use three binary variables to identify legal origin of each country: English law (En_law), French civil law (Fr_law), and German civil law (Ge_law). The Scandinavian law country is the numeraire [see LLSV (1998) for detailed definition of the five legal variables].

	reserve	En law	Fr law	Ge law	antidirector	creditor	enforce
reserve	1	-0.62 (<.0001)	0.13 (<.0001)	0.45 (<.0001)	-0.47 (<.0001)	-0.48 (<.0001)	-0.04 0.1228
En_law	-0.62 (<.0001)	1.00	-0.40 (<.0001)	-0.46 (<.0001)	0.79 (<.0001)	0.71 (<.0001)	0.16 (<.0001)
Fr_law	0.13 (<.0001)	-0.40 (<.0001)	1.00	-0.36 (<.0001)	-0.10 (<.0001)	-0.68 (<.0001)	-0.48 (<.0001)
Ge_law	0.45 (<.0001)	-0.46 (<.0001)	-0.36 (<.0001)	1.00	-0.75 (<.0001)	0.04 0.0766	-0.07 0.0058
antidirector	-0.47 (<.0001)	0.79 (<.0001)	-0.10 (<.0001)	-0.75 (<.0001)	1.00	0.40 (<.0001)	0.13 (<.0001)
creditor	-0.48 (<.0001)	0.71 (<.0001)	-0.68 (<.0001)	0.04 0.0766	0.40 (<.0001)	1.00	0.19 (<.0001)
enforce	-0.04 0.1228	0.16 (<.0001)	-0.48 (<.0001)	-0.07 0.0058	0.13 (<.0001)	0.19 (<.0001)	1.00

Table 2: Principal Component Analysis of Legal Variables (European Firms).

This table reports the principal component analysis results for the 1,757 listed Western European firms. The legal variables used in this analysis include (1) country's legal origin; (2) Anti-director index; (3) Creditor rights; (4) legal enforcement (Enforce); (5) reserve requirement (Reserve). I use three binary variables to identify legal origin of each country: English law (En_law), French civil law (Fr_law), and German civil law (Ge_law). The Scandinavian law country is the numeraire [data source: LLSV (1998)].

Panel A: Principal Component Analysis

	Eigenvalue	Proportion of Variation Explained	Cumulative of Proportion of Variation Explained
Prin1	3.250	0.464	0.464
Prin2	1.885	0.269	0.734
Prin3	0.960	0.137	0.871
Prin4	0.530	0.076	0.9465
Prin5	0.172	0.025	0.9712
Prin6	0.115	0.017	0.9876
Prin7	0.087	0.012	1

Factor Loadings

	Prin1	Prin2	Prin3
En_law	0.522	-0.011	-0.123
Fr_law	-0.250	-0.612	-0.037
Ge_law	-0.299	0.550	-0.308
antidirector	0.460	-0.274	0.143
creditor	0.415	0.355	-0.329
reserve	-0.405	0.141	0.260
enforce	0.166	0.319	0.832

Panel B: Summary Statistics of Prin1-Prin3 by Legal Origin**English law** (no of obs: 602)

Variable	Mean	Std	Minimum	Maximum
Prin1	2.349	0.327	1.091	2.434
Prin2	-0.029	0.224	-0.890	0.029
Prin3	-0.163	0.076	-0.454	-0.144

French law (no of obs: 419)

Prin1	-1.454	0.144	-1.823	-1.251
Prin2	-2.061	0.406	-2.357	-0.805
Prin3	-0.063	0.775	-1.340	0.484

Table 2 continued

German law (no of obs: 511)				
Prin1	-1.515	0.691	-2.629	-0.221
Prin2	1.619	0.366	0.838	1.953
Prin3	-0.462	1.191	-2.282	1.775
Scandinavian law (no of obs: 225)				
Prin1	-0.136	0.175	-0.355	0.045
Prin2	0.239	0.209	-0.033	0.456
Prin3	1.603	0.126	1.437	1.741

Panel C: Prin1-Prin3 and GDP Per Capita by Country

By country	Austria	Belgium	Finland	France	Germany	Ireland	Italy
Prin1	-0.221	-1.588	0.045	-1.455	-1.158	1.091	-2.209
Prin2	1.363	-0.805	-0.033	-2.128	1.761	-0.890	0.838
Prin3	-0.064	0.484	1.437	0.415	-0.654	-0.454	-2.282
gdp	14,666	14,975	15,271	15,437	23,560	13,000	13,680
Legal Origin	G	F	S	F	G	E	F
By country	Norway	Portugal	Spain	Sweden	Switzerland	U.K.	
Prin1	-0.064	-1.823	-1.251	-0.355	-2.629	2.434	
Prin2	0.282	-2.357	-2.300	0.456	1.953	0.029	
Prin3	1.741	-1.155	-1.340	1.650	1.775	-0.144	
gdp	18,917	9,296	11,496	15,836	16,298	15,073	
Legal Origin	S	F	F	S	G	E	

E: denotes English law origin, F: denotes French law origin, G: denotes German law origin,
S: denotes Scandinavian law origin

Table 3: Variable Definitions (European Firms).

This table gives variable names and definitions. The cash flow rights (Own), control rights (C), excess control (Excess), ownership type (Family) are constructed based on the ownership data provided by Faccio and Lang (2002). Principal components are constructed based on LLSV (1998) data [see table 2 for details]. Only the first three components are used in the final regression analysis.

Variable	Definition
C	the largest owner's voting rights as a percentage of total outstanding shares
O	the largest owner's cash flow rights as a percentage of total outstanding shares
Excess	the difference between control and cash flow rights held by the largest owner
Ex_c	the product of Excess and High control binary variable. The high control variable is set to 1 if the largest owner's control rights are above sample median and 0 otherwise.
Dividend	total cash dividends paid divided by total assets
Diversification	number of segment within a firm defined at the 2-digit SIC level
Leverage	the ratio of total debt over total assets. The total debt is the sum of long-term and short-term financial debt.
Accruals	mean absolute deviation of the ratio of total accrual over total assets.
CFTA	the ratio of cash flow from operations over total assets.
Market-to-book	the ratio of the sum of total book value of debt plus the market value of equity over total book value of assets
CapEx	the 3-year average ratio of capital expenditure to net sales
GDP	per capita GDP of an economy as of 1999 in US \$(source: Global Development Finance & World Development Indicators)
NDT	the ratio of depreciation expenses over total assets
Tangible	the natural log of the ratio of fixed assets total assets
Vol	earnings volatility measured by the standard deviation of earnings using historical upto 10-year data. This measure is computed for firms with at least five-year historical data.
Grow	the 3-year average growth rate in sales

Table 3 continued

Variable	Definition
Size	the natural log of total assets
Family	a binary variable set to 1 if the largest owner is an individual, a family, or an unlisted company.
Prin 1 - 3	The first three principal components derived from legal variables including reserve, English law dummy, French law dummy, German law dummy, Anti-director index, Creditor rights, and legal enforcement.

Table 4: Descriptive Statistics (European Firms).

This table reports descriptive statistics on variables for the whole sample (1,757) and by country.

Panel A: Overall Mean and Mean by Country

Variables	Overall	Austria	Belgium	Finland	France	Germany	Ireland
C	0.372	0.528	0.359	0.322	0.467	0.526	0.221
Own	0.329	0.452	0.325	0.281	0.454	0.468	0.198
Excess	0.043	0.076	0.034	0.041	0.012	0.058	0.022
Dividends	0.019	0.016	0.016	0.026	0.013	0.016	0.011
Diversification	2.460	2.382	2.868	2.286	2.977	2.581	1.921
Leverage	0.222	0.298	0.274	0.244	0.220	0.217	0.336
Accruals	0.069	0.061	0.053	0.059	0.051	0.082	0.085
CFTA	0.076	0.102	0.101	0.077	0.083	0.085	0.023
Market-to-book	1.360	0.755	0.849	1.170	1.167	1.090	2.014
CapEx	0.090	0.064	0.115	0.068	0.075	0.068	0.161
NDT	0.052	0.060	0.064	0.062	0.053	0.065	0.054
Tangible	0.321	0.364	0.316	0.333	0.226	0.299	0.419
Vol	0.209	0.079	0.317	0.050	0.124	0.078	0.609
Grow	0.143	0.067	0.059	0.106	0.148	0.100	0.274
Family	0.693	0.559	0.632	0.610	0.828	0.828	0.368
Size(in US\$ 000)	1,488,849	762,613	1,732,050	796,801	2,473,685	1,781,342	586,101
No. of Obs	1757	34	38	77	262	308	38

Table 4 continued

Variables	Italy	Norway	Portugal	Spain	Sweden	Switzerland	UK
C	0.512	0.309	0.402	0.322	0.242	0.435	0.253
Own	0.415	0.230	0.391	0.300	0.169	0.300	0.231
Excess	0.097	0.079	0.012	0.022	0.074	0.135	0.022
Dividends	0.013	0.017	0.013	0.019	0.022	0.014	0.026
Diversification	2.817	2.078	2.212	2.605	2.393	2.736	2.144
Leverage	0.237	0.334	0.286	0.193	0.231	0.245	0.189
Accruals	0.049	0.074	0.078	0.070	0.050	0.051	0.078
CFTA	0.081	0.040	0.051	0.090	0.054	0.103	0.070
Market-to-book	1.079	1.116	0.978	1.145	1.513	1.454	1.735
CapEx	0.091	0.180	0.094	0.117	0.059	0.072	0.098
NDT	0.049	0.063	0.060	0.044	0.052	0.049	0.043
Tangible	0.283	0.407	0.401	0.373	0.270	0.365	0.350
Vol	0.106	0.157	0.119	0.250	0.382	0.060	0.334
Grow	0.149	0.146	0.146	0.260	0.116	0.116	0.161
Family	0.817	0.500	0.758	0.651	0.583	0.759	0.615
Size(in US\$ 000)	4,594,997	1,017,820	543,123	1,389,098	1,280,644	1,387,989	773,282
No. of Obs	82	64	33	86	84	87	564

Table 4 continued

Panel B: Overall Median and Median by Country

Variables	Overall	Austria	Belgium	Finland	France	Germany	Ireland
C	0.310	0.549	0.336	0.287	0.500	0.508	0.192
Own	0.265	0.443	0.336	0.223	0.499	0.479	0.166
Excess	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dividends	0.013	0.009	0.012	0.022	0.009	0.010	0.008
Diversification	2.000	2.000	3.000	2.000	3.000	3.000	2.000
Leverage	0.204	0.287	0.255	0.245	0.209	0.198	0.321
Accruals	0.046	0.052	0.039	0.042	0.036	0.056	0.039
CFTA	0.087	0.101	0.097	0.097	0.078	0.091	0.069
Market-to-book	0.904	0.687	0.737	0.847	0.803	0.828	1.004
CapEx	0.046	0.060	0.060	0.057	0.044	0.046	0.051
NDT	0.046	0.058	0.058	0.058	0.047	0.057	0.040
Tangible	0.279	0.376	0.327	0.324	0.202	0.274	0.390
VOL	0.038	0.031	0.034	0.034	0.029	0.033	0.046
Grow	0.083	0.049	0.038	0.091	0.098	0.049	0.131
Family	1.000	1.000	1.000	1.000	1.000	1.000	0.000
Size(in US\$ 000)	163,123	180,077	473,788	126,479	228,912	193,793	171,834
No. of Obs	1757	34	38	77	262	308	38

Table 4 continued

Variables	Italy	Norway	Portugal	Spain	Sweden	Switzerland	UK
C	0.510	0.282	0.482	0.270	0.205	0.480	0.186
Own	0.472	0.219	0.482	0.231	0.126	0.249	0.165
Excess	0.002	0.000	0.000	0.000	0.000	0.051	0.000
Dividends	0.009	0.008	0.010	0.014	0.018	0.012	0.023
Diversification	3.000	2.000	2.000	3.000	2.000	3.000	2.000
Leverage	0.259	0.308	0.304	0.184	0.234	0.245	0.161
Accruals	0.035	0.041	0.047	0.043	0.040	0.038	0.052
CFTA	0.078	0.058	0.050	0.090	0.081	0.092	0.093
Market-to-book	0.760	0.899	0.766	0.904	0.972	1.028	1.061
CapEx	0.050	0.062	0.063	0.055	0.042	0.045	0.041
NDT	0.045	0.060	0.051	0.042	0.053	0.040	0.039
Tangible	0.255	0.378	0.379	0.370	0.257	0.341	0.295
Vol	0.034	0.065	0.042	0.035	0.046	0.036	0.052
Grow	0.076	0.066	0.139	0.161	0.098	0.067	0.084
Family	1.000	0.500	1.000	1.000	1.000	1.000	1.000
Size(in US\$ 000)	446,388	161,932	112,312	266,003	185,365	258,001	81,425
No. of Obs	82	64	33	86	84	87	564

Table 5: The Simultaneous Equations Regression Results (European Firms).

Panel A of this table gives the three-stage least square estimation results for the 1,757 listed Western European firms. ***, **, * represent significance at the 1%, 5%, and 10% level, respectively. System weighted R-Square is 0.15.

Variables	Coeff. Est.	t value	P value
<i>Dividends</i>			
Intercept	0.056	3.95	<.0001 ***
Own	-0.006	-1.48	0.1393
Excess	-0.051	-1.97	0.0492 **
Ex_c	0.043	1.64	0.1003
Diversification	-0.037	-3.3	0.001 ***
Leverage	-0.089	-3.33	0.0009 ***
Accruals	-0.006	-0.24	0.8086
CFTA	0.185	13.9	<.0001 ***
Capex	0.000	-0.04	0.9654
Size	0.004	2.32	0.0204 **
Prin1	-0.001	-0.93	0.3512
Prin2	-0.002	-2.07	0.0385 **
Prin3	0.001	1.35	0.1772
Industry 1-10	included		
<i>Diversification</i>			
Intercept	1.672	1.4	0.1621
Own	-0.141	-1.08	0.2816
Excess	-1.264	-1.74	0.0822 *
Ex_c	1.076	1.48	0.1402
Dividends	-18.740	-2.96	0.0031 ***
Leverage	-1.684	-2.79	0.0053 ***
Accruals	0.064	0.1	0.9198
CFTA	6.473	13.81	<.0001 ***
Size	0.085	5.09	<.0001 ***
Family	-0.004	-0.17	0.8669
GDP	-0.068	-0.26	0.7939
Prin1	-0.052	-2.26	0.0238 **
Prin2	-0.057	-2.42	0.0157 **
Prin3	0.025	0.9	0.3688
Industry 1-10	included		

Table 5 continued

Variables	Coeff. Est.	t value	P value
<i>Leverage</i>			
Intercept	0.224	1.37	0.1699
Own	-0.036	-1.75	0.0803 *
Excess	-0.247	-1.81	0.0708 *
Ex_c	0.237	1.83	0.0668 *
Dividends	-2.288	-0.64	0.5253
Diversification	-0.124	-1.75	0.0806 *
Accruals	-0.054	-0.16	0.8704
CFTA	0.471	1.94	0.0529 *
NDT	0.202	1.11	0.2668
Tangible	0.137	1.76	0.079 *
Size	0.018	2.04	0.0418 **
Prin1	-0.014	-1.35	0.1785
Prin2	-0.007	-1.47	0.1424
Prin3	0.011	2.5	0.0124 **
Industry 1-10	included		
<i>Accruals</i>			
Intercept	-0.061	-0.4	0.69
Own	0.021	0.6	0.5477
Excess	0.367	1.56	0.1191
Ex_c	-0.342	-1.48	0.138
Dividends	7.402	2.22	0.0262 **
Diversification	0.250	2.42	0.0156 **
Leverage	-0.115	-0.4	0.6925
CFTA	1.069	2.68	0.0074 ***
Size	-0.048	-3.07	0.0021 ***
Vol	0.119	3.81	<.0001 ***
Prin1	0.000	0.01	0.9936
Prin2	0.017	2.28	0.0229 **
Prin3	-0.001	-0.07	0.946
Industry 1-10	included		

Table 5 continued

Variables	Coeff. Est.	t value	P value
<i>CFTA</i>			
Intercept	-0.125	-2.95	0.0032 ***
Own	0.010	0.58	0.5604
Excess	0.100	0.94	0.3462
Ex_c	-0.088	-0.83	0.4056
Diversification	0.105	3.15	0.0016 ***
Size	-0.003	-0.72	0.4697
Prin1	0.010	2.43	0.0151 **
Prin2	0.008	2.3	0.0218 **
Prin3	0.000	-0.12	0.9036
Industry 1-10	included		
<i>Market-to-book</i>			
Intercept	12.894	3.37	0.0008 ***
Own	-1.812	-1.79	0.073 *
Excess	-16.995	-2.82	0.0049 ***
Ex_c	14.931	2.69	0.0073 ***
Dividends	-262.996	-1.91	0.0566 *
Diversification	-10.065	-3.88	<.0001 ***
Leverage	-24.309	-2.72	0.0067 ***
Accruals	14.564	2.02	0.0439 **
CFTA	36.176	4.16	<.0001 ***
Grow	-0.353	-0.33	0.7407
Size	1.332	3.07	0.0022 ***
Prin1	-0.302	-1.14	0.2546
Prin2	-0.550	-3.01	0.0027 ***
Prin3	0.388	1.88	0.0603 *
Industry 1-10	included		

Table 5 continued

Panel C: Net effects of Own and Excess

	Whole sample		Low control firms		High control firms	
	5% increase in Own	5% increase in Excess	5% increase in Own	5% increase in Excess	5% increase in Own	5% increase in Excess
Dividends	0.0007	-0.0064	0.0006	-0.0056	0.0008	-0.0258
Diversification	-0.0028	-0.0251	-0.0029	-0.0264	-0.0027	0.0024
Leverage	-0.0047	-0.0232	-0.0048	-0.0236	-0.0046	0.0012
Accruals	-0.0096	0.0142	-0.0099	0.0146	-0.0093	0.0127
CFTA	-0.0026	-0.0197	-0.0029	-0.0213	-0.0025	0.0149
MB	-0.0120	-0.0809	-0.0110	-0.0743	-0.0131	-0.0011

Table 6: The Ordinary Least Squares Regression Results (European Firms).

This table gives the OLS regression results for the 1,757 listed Western European firms.

***, **, * represent significance at the 1%, 5%, and 10% level, respectively.

Variables	Coeff. Est.	t value	P value
<i>Dividends</i>			
Intercept	0.018	3.17	0.0016 ***
Own	-0.004	-1.6	0.11
Excess	-0.010	-0.72	0.4705
Ex_c	0.002	0.17	0.8676
Diversification	0.000	0.06	0.9485
Leverage	-0.025	-7.91	<.0001 ***
Accruals	-0.004	-0.55	0.5848
CFTA	0.072	14.85	<.0001 ***
Capex	-0.003	-0.92	0.3596
Size	0.000	-0.29	0.7743
Prin1	0.003	8.57	<.0001 ***
Prin2	0.000	0.98	0.3264
Prin3	0.001	1.36	0.1743
Industry 1-10	included		
<i>Diversification</i>			
Intercept	-3.720	-2.17	0.0298 **
Own	0.000	0	0.9981
Excess	-1.010	-1.44	0.1515
Ex_c	1.097	1.55	0.1222
Dividend	0.241	0.2	0.8425
Leverage	-0.098	-0.61	0.545
Accruals	0.098	0.3	0.7633
CFTA	0.321	1.24	0.2155
Size	0.124	8.08	<.0001 ***
Family	-0.045	-0.78	0.4366
GDP	1.041	2.56	0.0106 **
Prin1	-0.092	-5.58	<.0001 ***
Prin2	-0.109	-4.16	<.0001 ***
Prin3	-0.019	-0.73	0.4636
Industry 1-10	included		

Table 6 continued

Variables	Coeff. Est.	t value	P value
<i>Leverage</i>			
Intercept	0.046	1.12	0.2636
Own	-0.032	-1.82	0.0689 *
Excess	-0.134	-1.33	0.1837
Ex_c	0.140	1.38	0.1669
Dividend	-1.235	-7.18	<.0001 ***
Diversification	0.000	-0.1	0.9177
Accruals	0.054	1.11	0.2663
CFTA	-0.254	-6.73	<.0001 ***
NDT	0.315	2.62	0.009 ***
Tangible	0.185	8.74	<.0001 ***
Size	0.010	4.59	<.0001 ***
Prin1	-0.006	-2.48	0.0134 **
Prin2	0.000	-0.11	0.9163
Prin3	0.011	2.88	0.0041 ***
Industry 1-10	included		
<i>Accruals</i>			
Intercept	0.237	12.09	<.0001 ***
Own	0.023	2.5	0.0125 **
Excess	0.046	0.9	0.3688
Ex_c	-0.052	-1	0.318
Dividend	-0.047	-0.52	0.6011
Diversification	0.001	0.46	0.6458
Leverage	-0.002	-0.19	0.8502
CFTA	-0.129	-5.99	<.0001 ***
Size	-0.011	-10.3	<.0001 ***
Vol	0.001	0.47	0.6371
Prin1	0.000	0.17	0.866
Prin2	0.004	2.89	0.0038 ***
Prin3	-0.005	-2.66	0.0079 ***
Industry 1-10	included		

Table 6 continued

Variables	Coeff. Est.	t value	P value
<i>CFTA</i>			
Intercept	-0.067	-2.55	0.011 **
O	0.016	1.27	0.204
Excess	0.014	0.2	0.8401
Ex_c	-0.003	-0.04	0.9658
Diversification	0.004	1.51	0.1313
Size	0.010	6.33	<.0001 ***
Prin1	-0.0002	-0.1	0.9231
Prin2	0.002	0.84	0.3994
Prin3	-0.002	-0.58	0.5601
Industry 1-10	included		
<i>Market-to-book</i>			
Intercept	1.340	3.77	0.0002 ***
Own	-0.108	-0.68	0.4978
Excess	-2.535	-2.78	0.0055 ***
Ex_c	2.296	2.51	0.0122 **
Dividend	11.749	7.42	<.0001 ***
Diversification	-0.066	-2.11	0.0349 **
Leverage	0.083	0.39	0.6954
Accruals	2.074	4.74	<.0001 ***
CFTA	-1.407	-4.17	<.0001 ***
Grow	0.945	8.51	<.0001 ***
Size	-0.024	-1.17	0.2411
Prin1	0.037	1.76	0.0779 *
Prin2	0.024	0.99	0.3247
Prin3	0.035	1.06	0.2898
Industry 1-10	included		

Table 7: Differential Impact of Excess on Firm Policy and Performance.

This table presents the differential impact of excess control rights held by the largest owner on dividends, diversification, leverage, accruals, operating efficiency, and the market-to-book ratio. The table is constructed based on the 3SLS results using the European model specification.

	Dividends		Diversification		Leverage		Accruals	
	Europe	Asia	Europe	Asia	Europe	Asia	Europe	Asia
Excess	<0	>0	<0	>0	<0	>0	>0(notsig)	<0

	CFTA		Market-to-book	
	Europe	Asia	Europe	Asia
Excess	>0(notsig)	>0	<0	>0

Table 8: Stock Markets' Importance in National Economy. (in billions of US \$)

Region	Country	Year 2000 GDP	Year 2000 Stock Market value	%
North America	United States	9,963.1	15,214.6	152.7%
Europe	Austria	189.8	29.9	15.8%
	Belgium	226.6	182.5	80.5%
	Finland	121.3	293.6	242.1%
	France	1,294.8	1,446.6	111.7%
	Germany	1,872.4	1,270.2	67.8%
	Norway	159.4	65.8	41.3%
	Portugal	105.1	60.7	57.8%
	Spain	558.3	504.2	90.3%
	Sweden	227.3	328.3	144.5%
	Switzerland	241.2	792.3	328.4%
	United Kingdom	1,417.6	2,612.2	184.3%
Asia	Hong Kong	162.6	623.4	383.4%
	Indonesia	153.3	26.8	17.5%
	Korea	457.2	148.4	32.4%
	Malaysia	89.3	113.2	126.7%
	Philippines	74.7	25.3	33.8%
	Taiwan	-	247.6	-
	Thailand	122.2	29.2	23.9%

Source : World Federation of Exchanges Website

(Original data is compiled from IMF International Financial Statistics Yearbook 2001).

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