

Audit Committee, Ownership Structure, and Firm Valuation
Evidence from East Asian Markets

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Abstract

We investigate determinants of audit committee composition in three East Asian markets, in which controlling shareholders of many firms exert control through pyramidal structures and cross shareholdings with voting rights that are in excess of cash flow rights. We document effects of ownership concentration and deviation from the “one-share/one-vote” ownership on the independence and professionalism of established audit committees. Our analysis of 450 firms in Hong Kong, Singapore, and Malaysia in the year of 2000 indicates an increased percentage of independent directors serving audit committees in firms with controlling shareholders with larger cash flow rights or/and less deviation between voting rights and cash ownership. We document that firms with independent and professional audit committee are associated with higher market-to-book ratios, as well as one-year cumulative returns. Overall, our results are consistent with the hypotheses that ownership structure affects audit committee composition, and that independent and professional audit committee enhances firm valuation.

Keywords: Corporate Governance, Board of Directors, Audit Committee

1. Introduction

Dated from report of the Blue Ribbon Committee (BRC) of Improving the Effectiveness of Corporate Audit Committee Research in 1999, the audit committee has been charged with an important role of corporate accountability through overseeing the financial reporting process. The BRC report issued recommendation geared to enhance the independence and financial literacy/expertise of audit committee members. Following the BRC report, the NYSE and NASDAQ modified their requirement of audit committee members in December 1999¹. Both exchanges disallow certain directors (current employees, ex-employees in the previous three years, or immediate family members of an executive) serving as audit committee members. The recent enactment of Sarbanes-Oxley Act in 2002 again highlighted audit committee as an integral part of effective corporate governance, in requiring mandated disclosure on the financial expertise of audit committee members in Section 407.

Audit committee oversees a firm's financial reporting process, by meeting regularly with the firm's outside auditor as well as internal financial manager to review the corporation's financial statements, audit process, and internal accounting controls. An audit committee could improve quality of a firm's financial reports, as firms with established audit committees are more likely to have reliable financial reporting (i.e., absence of errors, irregularities and illegal acts) (McMullen 1996). In addition, there are ample evidences that the effectiveness of an audit committee is highly correlated with the independence and financial expertise (professionalism) of its members. Klein

¹ The Securities Exchange Commission (SEC) also adopted new rules of disclosure by audit committee (SEC release No. 34-42266, Adopting Rules Regarding Disclosure by Audit Committee, Including Discussions with Auditors Regarding Financial Statements).

(2002) documents a negative relationship between audit committee independence and abnormal accruals. Carcello and Neal (2003) report that distressed firms with more independent audit committees are less likely to receive issuance of going concern reports from their auditors. Xie et al. (2003) find that firms adopting board and audit committee with corporate or financial backgrounds are associated with smaller discretionary current accruals. To the extent that abnormal accruals serves as a good measure of firm's intensity in earnings management, an audit committee with higher independence and professionalism would increase firm valuation by improving the governance of the corporation through enhanced quality and credibility of its financial reports.

In the crisis of Asian financial markets in late 1990s, the importance of effective corporate governance was put to a serious test². Johnson et al. (2000) report that the effectiveness of minority shareholder protection explains the extent of exchange rate depreciation and stock market decline better than various macroeconomic measures do. Mitton (2002) documents that 398 firms from Indonesia, Korea, Malaysia, the Philippines, and Thailand with indicator of higher disclosure policy and higher outside ownership concentration have significant better stock performance during the East Asian Financial Crisis of 1997-1998. Consequently, recent emphasis has been placed on strengthening the independence and oversight role of the board of directors among Asian countries. In particular, establishment of an independent audit committee on the board has been high on the agenda, with the goal of reducing information asymmetry between controlling shareholders and other investors.

² Stiglitz (1998) and Harvey and Roper (1999) cite weak corporate governance as one of the causes of East Financial Crisis.

Most regulatory agencies from East Asian countries governments have taken measures to require all publicly listed companies of instituting audit committees. For example, the Stock Exchange of Hong Kong has since 1992 amended its rules to require independent board directors and encouraged greater disclosure, accountability and the use of audit committees; and since January 1999, every listed company has been encouraged to set up an audit committee³. The regulatory agencies in Singapore and Malaysia have also mandated that every publicly listed company establish audit committee since 1989 and 1994, respectively. However, little has been known about the effectiveness of audit committees in those countries, and the economic determinants of independence and professionalism in those established committees. Our paper fills such gap.

East Asian companies are characterized by large shareholders with highly concentrated ownership⁴. Analysis on those firms provides an opportunity to investigate audit committee composition in presence of an ownership structure distinctly different from that of most U.S. firms. On the one hand, concentrated ownership could mitigate the typical agency problem as the controlling shareholders have the incentive to effectively monitor and discipline firm's management (positive incentive effect). On the other hand, a new agency conflict may arise: as large shareholders enjoy power over the designation and monitoring of managers they may become entrenched and pursue their own interests by expropriating minority shareholders. The action of expropriation imposes cost, and reduces the value of the

³ Although it is not mandatory to establish an audit committee for public firms in Hong Kong, the listing rules require disclosure on firm's current status on this recommended compliance (on audit committee establishment) in their annual reports.

⁴ La Porta et al. (1999), Claessens, Djankov, and Lang (2000), and Faccio and Lang (2002) find that controlling shareholders of publicly traded firms in most countries typically have significant control in excess of their cash flow investment by using pyramidal and cross-holding ownership structure.

firm (Burkart, Gromb, and Panunzi 1998). In many firms, this conflict may be exacerbated and pronounced when large shareholders exert control with a disproportionately small cash-flow stake (the entrenchment effect). This results in a decrease in the value of the firm when its ownership deviates from the “one-share/one-vote” structure, that is, when there is a divergence of voting and cash flow rights (Bebchuk et al. 2000; Claessens, Djankov, Fan, and Lang 2002).

We examine a sample of the largest listed companies, based on market values at the yearend of 2000 in the markets of Hong Kong, Singapore, and Malaysia, respectively. We develop testable hypotheses on the determinants of audit committee composition, as well as on the effect of audit committee on firm valuation in presence of concentrated ownership. Controlling shareholders may select audit committee members that are more likely to both monitor and provide professional expertise when the positive incentive effects of ownership are high. In this situation, controlling shareholders would gain more from increasing shareholder wealth than they would lose in foregoing expropriation. In contrast, controlling shareholders may select affiliated audit committee members to further entrench themselves when the private benefits of their excess control outweigh the positive incentive effects of cash flow ownership. In this situation, the net personal benefit of expropriation outweighs the gains from shareholder wealth maximization. In our study, we disentangle the cash flow and entrenchment effects, when large shareholders with concentrated ownership are prevalent, and examine their respective impacts on the audit committee composition.

Our analysis of 450 firms in Hong Kong, Singapore, and Malaysia in the year of 2000

indicates an increased percentage of independent directors serving audit committees in firms with controlling shareholders with larger cash flow rights or/and less deviation between voting rights and cash ownership. We document that firms with independent and professional audit committee are associated with higher market-to-book ratios, as well as one-year cumulative returns. Overall, our results are consistent with the hypotheses that ownership structure affects audit committee composition, and that independent and professional audit committee enhances firm valuation.

The remainder of this paper is organized as follows. Section two presents our hypotheses and discusses the empirical predictions. Section three describes the sample and variable construction. Section four presents our empirical tests and results. Section five concludes the paper.

2. Empirical Predictions

Numerous studies document the predominant existence of a single large controlling shareholder in firms around the world. An important related question is how the ownership of the controlling shareholder affects a firm's governance structure. In our study, we focus on firm's choice of audit committee composition. The interest alignment hypothesis predicts that the possession of a higher level of cash flow rights by large shareholders serves to commit them to active monitoring and firm value maximization through instituting an effective audit committee. As a result, the hypothesis predicts, all else equal, a positive correlation between the cash flow rights of the controlling shareholders and the percentage of audit committee members with independence and financial expertise.

Prediction of Interest Alignment Hypothesis on Determinants of Audit Committee

Composition

Both percentages of independent and professional audit committee members should increase as the cash flow rights of the controlling shareholder increase.

The agency problem of concentrated ownership results from conflicts between the controlling shareholder and minority shareholders. Grossman and Hart (1988) and Harris and Raviv (1988) show that separating ownership and control lowers the shareholder value, and may not be socially optimal. Shleifer and Vishny (1997) illustrate that when ownership goes beyond a certain point and large owners gain almost full control, private control benefits are generated for the large shareholder that are not shared by the minority shareholders. With a deviating control-cash structure, the controlling shareholder may be strongly motivated to opportunistically expropriate minority shareholders by deliberately choosing affiliated individuals, as well as members with no financial expertise to serve in the audit committee. As a result, the entrenchment hypothesis would predict a negative correlation between the choice of independent and professional audit committee members and a divergent control-cash ownership structure.

Prediction of Entrenchment Hypothesis on Determinants of Audit Committee

Composition

Both percentages of independent and professional audit committee members should decrease with the degree of deviation between the voting and cash flow rights of the controlling shareholder.

The selection of independent and professional audit committee members signal the commitment by controlling shareholders to increase shareholder wealth. Alternatively, a firm's choice of audit committee members based on their expertise rather than affiliation limit potential expropriation (by large controlling shareholders) and increase firm valuation, as the selected committee are more likely to conduct effectively monitoring. Anderson, Mansi, and Reeb (2002) and Boraj and Sengupta (2002) find that independent boards are associated with lower costs of debt financing, suggesting that independent directors serve a certification role for firm⁵. Yeh, Lee, and Woidtke (2001) find a positive valuation effect in a sample of Taiwanese firms when controlling families hold less than 50% of a firm's board seats. Consequently, we formulate prediction on firm valuation (measured by market-to-ratio and stock returns) based on our sample firm's choice of audit committee members.

Prediction of Choice of Audit Committee on Firm Valuation

Firms with high percentages of independent and professional audit committee members should be associated with high market-to-book ratios and stock returns.

3. Sample Description and Variable Construction

The sample used in our study consists of the largest 150 listed companies, based on market values at the yearend of 2000, in Hong Kong, Singapore, and Malaysia. The final sample consists of 450 firms, with our sample firms in each country representing

⁵ Existing studies in the U.S. provide mixed support for the role of independent directors. For example, Rosenstein and Wyatt (1990) find a positive market reaction to the addition of outside directors; and Byrd, Fraser, Lee, and Williams (2002) find that thrifts surviving the thrift crisis had more independent directors than those that failed. On the other hand, Baysinger and Butler (1985), Hermalin and Weisbach (1991), Mehran (1995), and Bhagat and Black (2001) find no significant correlation between the fraction of independent directors on a firm's board and either accounting or long-term stock performance.

79.89%, 71%, and 81.1% of total market capitalization in Hong Kong, Singapore, and Malaysia, respectively.

We select these three East Asian countries of Hong Kong Singapore, and Malaysia in view of their similar ownership structures and corporate governance environments. These three countries have either four or five provisions in place⁶ among the six shareholders right protection measures in La Porta et al. (1998). In 2004, these three countries are also ranked by Credit Lyonnais Securities among the top ten Asian emerging markets based on the five dimensions of: rules, regulations, enforcement; political/regulatory interference; international Generally Accepted Accounting Principles; institutional mechanisms; and corporate governance culture.

The three countries also undertake similar path in improving their regulations on composition of audit committee, and measures of corporate governance in general. The Stock Exchange of Hong Kong has amended its rules to require independent directors and encouraged greater disclosure, accountability and the use of audit committees since the year of 1992⁷. It is required that each listed company have a minimum of two independent non-executive directors on its boards. Since January 1999, every listed company has been expected to set up an audit committee.

Audit committee became mandatory for publicly listed companies in Singapore in 1989. The committee must be appointed by the board of directors and should consist

⁶ The average measure is four for firms in the common law countries, and five for firms in the U.S.

⁷ In Hong Kong, the market regulators are the Securities and Futures Commission and the Stock Exchange of Hong Kong. The Securities and Futures Commission enjoys powers of investigation and enforcement that the exchange lacks (the highest penalty that the exchange can impose is suspension or de-listing). The main drivers of corporate governance reform in Hong Kong have been the Stock Exchange of Hong Kong, the Securities and Future Commission, professional bodies and a few maverick shareholder activists.

of no less than three board members, with a majority of independent non-executive directors. The stock exchange sought to strengthen audit committee by introducing Chapter 9B into its Listing Manual and making its provisions mandatory in 1996. In 1998, the exchange decided to reformulate these rules into guidelines as a Best Practices Guide outside the Listing Manual. In December 1999, the government set up three committees (committee on company legislation and regulatory framework, the committee on disclosure standards, and the corporate governance committee), lead by private sections, to carry out a comprehensive review of issues on disclosure and governance.

In Malaysia, the listed companies have been required by the Securities Commission and the Stock Exchange to establish audit committees consisting of at least three members, and with a majority of independent non-executive directors since 1994. The regulatory authorities also established the High Level Finance Committee on Corporate Governance in March 1998. The committee subsequently produced a “Proposed Malaysian Code on Corporate Governance”, aiming primarily at changes in the board composition of listed companies as well as in laws and regulations to clarify the responsibilities and obligations of major shareholders.

We construct our sample for the year of 2000, as all three countries have strengthened their standards on audit committee in the late 1990s. We manually construct information of ownership structure, corporate board characteristics, as well as audit committee from the annual reports our sample firms filed with each regulatory agency in Hong Kong, Singapore, and Malaysia in the year of 2000. Financial figures and stock returns are obtained from Datastream and Compustat.

The ultimate controlling shareholder and their associated voting and cash flow rights are identified and constructed with the procedure used in La Porta *et al.* (1999) and Claessens *et al.* (2000). The chains of ownership, if available, are traced all the way back to the ultimate owners for each sample firm. The shareholder with the dominant voting rights is designated as the controlling shareholder. We consider both directly- and indirectly- held shares in calculating both the voting and cash flow rights of a firm's ultimate controlling shareholder. Directly-held shares are those rights registered in the name of the controlling shareholder, while indirectly-held shares are those held by individuals and business affiliated with the controlling shareholder. Direct voting rights are then calculated as the sum of the fraction of shares registered to the ultimate controller; the indirect voting rights are calculated as the "weakest link" in the chain of shares (lowest percentage of all) held by firms that the ultimate owner controls. The ultimate controller(s) could be a family, an individual, the State, a widely held financial institution, a widely held corporation, or other as defined in La Porta *et al.* (1999). In Panel A of Table 1, we present the information of our sample categorized by the types of ultimate owner. In our sample, family-controlled firms account for 72% of the entire sample, with percentages of 75.33%, 76.67%, and 64% for sub-samples in Hong Kong, Singapore, and Malaysia respectively. Government-controlled firms account for 16.44% of the entire sample, with percentages of 16%, 19.33%, and 14% for sub-samples in Hong Kong, Singapore, and Malaysia respectively.

[Table 1 about here]

Concentrated ownership and family control are common among our sample firms. Majority of our sample firms have established audit committees⁸, as presented in Panel B of Table 1. Panel B indicates that 89% of the sample firms with data available have clearly established an audit committee, while 8% of firms have no audit committees and 2% of firms have no disclosure (8%) on audit committee composition. All firms classified as “firms with no audit committee” are operating in Hong Kong. Panel C presents data on the percentage of independent directors serving on the audit committees of our sample firms, with a percentage of zero independence directors for those 48 firms categorized as “with no audit committee”. It is observed that as there is the highest percentage (31%) of companies with no independence directors serving the audit committee in Hong Kong (31%), there is also a highest percentage (47%) of companies with audit committees consisting solely of independent directors (47%). Twenty-nine percent of the companies in Singapore have completely independent audit committees, and a meager 7% of companies in Malaysia have completely independent audit committees. The majority of companies in Singapore and Malaysia have the percentages of independent directors on audit committees ranging between 33% and 66%.

Other characteristics of an audit committee are constructed for our sample firms. The number of audit committee members is used to measure the size of an audit committee. In our sample, most firms have three directors serving on the audit committee. Following Xie et al. (2003), we make further classification on independent directors by their professional background. Financial directors are those independent

⁸ All companies listed in both Singapore and Malaysia are required to have an audit committee consisting of a majority of independent members and an independent chairman. In Hong Kong, the Code of Best Practices recommends listed firms to establish audit committees, or disclose reasons on why firms opt not to establish such committees.

directors who are current or past executives of a financial institution, or Certified Public Accountants.⁹ Legal directors are those independent directors who are law practitioners. In our sample, an average of 45% of audit committee directors is categorized as “independent” and “professional”. Finally, we construct an audit committee profession dummy indicator, with value of one when 50% or more of the directors on a firm’s audit committee are either a Financial or Legal director as defined above.

The set of ownership variables are constructed using the following procedure. When multiple control chains exist, we take voting rights to be the sum of the voting rights along the chain with the weakest link of all the holding layers. Our variable of “voting rights” is used as a measure of the controlling shareholder’s ability to affect the decisions of a firm, such as through the election of directors to the board and the appointment of supervisors. The indirect voting rights of a major shareholder may be channeled through a pyramidal structure or cross shareholding. When a major shareholder invests in a listed company A, which in turn invests in another listed company B, we assume that the controlling shareholder obtains indirect control over company B through a pyramidal structure. There may be multiple layers of chains through which a shareholder exerts control. Cross shareholding is a structure in which various affiliated business entities are controlled by the same major shareholder through the affiliated entities holding equity shares in each other. There are some

⁹ Generally speaking, company listing regulations or best practices require at least one independent director with financial or accounting expertise, but the definition of expertise is fairly loose. For example, work experience in a financial or accounting department of a corporation could qualify directors as having financial or accounting expertise. However, this information is typically not disclosed for directors listed as employees of other companies in annual reports. We therefore would not classify these directors as Financial directors but would instead classify them as Corporate directors. To the extent these directors are as highly qualified to certify the informativeness of earnings as Financial directors based on our stricter definition, we should find similar results for both Corporate and Financial directors.

cases of cross shareholding in which the controlling shareholder uses the company's resources to institute a nominal company that owns shares of the listed company. With both a pyramidal structure and cross shareholding, the voting rights of a controlling family are aggregated from their collective direct and indirect voting rights over the firm.

In measuring the degree of excess control (divergence from the one share-one vote ownership structure), as a proxy for the controlling shareholder's incremental motive to extract private benefits from the firm, we calculate the difference between the controlling shareholder's voting and cash flow rights. Under such a ownership structure, the controlling shareholder could receive the entire benefit of wealth expropriation, but only bears a fraction of the cost. Appendix A presents an example, illustrating how such a variable is constructed in our study. In our sample, the controlling shareholders own an average of 32% of cash flow rights, while possessing 46% of the voting rights. A 68% of our sample firms have divergence between cash and control rights of the largest shareholders, with an average of 14% control rights in excess of cash flow rights.

We construct several measures of firm's general governance structure. First, we obtain the information of the number of board members. Yermack (1996) documents a higher Tobin's Q for companies with small boards and suggests that large boards are ineffective due to poor communication and decision-making. Presumably, small boards could be more effective in instituting action to improve corporate governance practices. In our sample, there is an average of 8.84 directors serving on the corporate board. Second, the board composition reveals the influence of the controlling

shareholder over the firm. We focus on the proportion of directors and supervisors on the board who are affiliated with the controlling shareholder. The greater the proportion of the board membership that is affiliated with the largest shareholder, the easier it is for an entrenched controlling shareholder to pursue non-profit-maximizing objectives in return for personal gains. We identify the directors and supervisors (board members) associated with the controlling shareholder, including family members and the representatives of controlled institutions. Unaffiliated board members are classified as the "independent" directors. In our sample, an average of 38% of the board directors is classified as "independent". Finally, the extant prior literature and positions advocated by regulators call for an separation of the roles CEO and board Chair. We construct an indicator variable, with value of one when an individual affiliated with the largest shareholder (group) serves both as the board chairman and the CEO of the firm, and zero otherwise. In our sample, a 53% percentage of firms have an individual affiliated with the controlling shareholder serving the dual role of CEO and chairman.

Several measures of firm's financial performance are constructed. Total Asset is the book value of total assets (in US\$ millions). ROA_{1999} is return on asset in the year of 1999. Leverage is the ratio of book value of debt over book value of total assets, while R&D is the ratio of R&D expenditures over sales. Table 2 presents a summary of the variables constructed for our analysis, while Table 3 presents the summary statistic of those variables.

[Table 2 and Table 3 about here]

4. Empirical Results

We describe the empirical tests and then discuss our results in this section.

4.1 Univariate Analysis

Table 5 presents the univariate statistics for the difference in means of variables constructed in the earlier section, between the two subgroups of sample firms with or without an audit committee consisting entirely of independent members. As our results indicate, ownership of cash flow rights as well as board size is significantly higher in the subsample of firms with an audit committee consisting entirely of independent members. On the contrary, excess control rights as well the size of audit committee is significantly higher in the subsample of firms without an audit committee consisting entirely of independent members. Among firms with an audit committee consisting entirely of independent members, the likelihood of the same person serving the dual role of chairman and CEO, the ratio of R&D expense over sales, market-to-book ratio, and CAR are marginally higher.

[Table 4 and Table 5 about here]

4.2 Regression Analysis

For our first set of hypotheses, we examine the effect of ownership variables on the independence and professionalism of a firm's audit committee. Of main interest among the explanatory variables is the set of ownership variables, which comprises cash flow rights, the deviation between voting and cash flow rights, and the proportion of affiliated directors and supervisors. As described in detail in the previous section, both the cash flow hypothesis and the entrenchment hypothesis would be rejected if there is no significant correlation between the ownership

variables and audit committee composition. We present the regression results on the percentage of independent audit committee members, audit committee independence dummy, as well as percentage of professional audit committee members in Table 6¹⁰.

[Table 6 about here]

Our choice of other independent variables is guided by results from prior studies on audit committee. Firm size captures information on the development stage of a business entity, which could be important in selecting audit committee members. We include both the logarithm of total assets (a measure of firm size) in our analysis. The free cash flow hypothesis (Jensen (1986)) predicts that a high level of debt reduces agency costs, as fixed debt payments force managers to disgorge any free cash flow that may have been misused. Previous studies have used intangible assets (as proxied by research and development (R&D) expenses scaled by total sales) as a proxy for firm's growth and innovation activities. Demands for monitoring by firm's audit committee may be different for firms with different debt ratios, R&D intensity, and profitability. We use the debt ratio, the R&D ratio, as well as ROAs to capture those effects on audit committee composition.

Our results for determinants of the percentage of independent audit committee members indicate that cash flow rights are positively correlated at a 5% significance level, in support of the positive interest alignment effect of large shareholders. The statistically significant correlation remains in the analyses on the audit committee independence dummy. However, this result is consistent with the cash flow hypothesis that the possession of greater cash flow rights provides the controlling

¹⁰ We also include country dummies (not reported) in each regression analysis.

shareholder with an incentive to maximize firm value by establishing an independent audit committee to exert effective monitoring. In contrast, a deviating voting-cash structure is associated with a lower percentage of independent audit committee members, and a reduced likelihood of entirely independent audit committee, which is consistent with the entrenchment hypothesis. In our sample, audit committee with higher percentage of independent members is more likely to be one with more financial sophisticated directors, despite an insignificant correlation between ownership structure and audit committee professionalism.

[Table 7 about here]

In Table 7, we present the regression results on the percentage of independent audit committee members, and audit committee independence dummy by including interaction terms of cash flow ownership and excess control variables. The major findings reported earlier in Table 6 remain.

An effective audit committee, free from conflict of interest and capable of producing professional judgment, could improve the integrity of firm's financial reporting process and firm governance in general. Defond et al (2005) report a significantly positive 3-day cumulative abnormal returns around the appointment of accounting financial experts to the audit committee, but not around the appointment of non-accounting financial experts or directors without financial expertise. In addition, CARs are only positive when the newly appointed outside directors are independent (as opposed to affiliated), and when the appointing firms have relatively strong corporate governance prior to appointing the new directors. We investigate the correlation between the existence of an effective audit committee and firm valuation.

[Table 8 and Table 9 about here]

Table 8 and 9 presents regression results on effects of various measure of audit committee effectiveness on market-to-book ratios and 1-year CAR respectively. We find higher valuation (market-to-book ratio) and superior stock returns among firms with higher percentage of members with financial expertise in an audit committee fully consisting of independent directors

5. Conclusion

In this paper, we examine the effects of ownership structure on the independence and professionalism of audit committee in the East Asian markers. Many of our sample firms are owned by ultimate shareholders who exert control through pyramidal structures and cross shareholdings. Such presence of shareholders with concentrated ownership and deviation of the voting and cash flow rights provide us with a unique opportunity to evaluate distinct hypotheses on cash flow/entrenchment effects on selecting audit committee members.

Our analysis of 450 firms Hong Kong, Singapore, and Malaysian markets in the year of 2000 indicates a strong positive correlation between cash flow ownership of large shareholders and percentage of independent audit committee members, which is consistent with the hypothesis that large cash flow ownership provides incentives for large shareholders to adopt better governance structure. We also report less independent audit committees for firms of a deviating voting-cash structure, consistent with entrenched large shareholders adopting inferior governance structure

in order to exploit the wealth of minority shareholders. In our sample, audit committee with higher percentage of independent members is more likely to be one with more financial sophisticated directors, despite an insignificant correlation between ownership structure and audit committee professionalism. Furthermore, we find higher valuation (market-to-book ratio) among firms with higher percentage of members with financial expertise in an audit committee fully consisting of independent directors. Such firms also exhibit superior one-year stock returns. Altogether, our results are consistent with the hypotheses that ownership structure affects audit committee composition, and that independent and professional audit committee enhances firm valuation.

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Table 1: Ultimate Control Type and Audit Committee Independence by Country

Panel A: Ultimate Control Owner by Type									
Type	Hong Kong		Singapore		Malaysia		ALL		
	N	Fraction (%)	N	Fraction (%)	N	Fraction (%)	N	Fraction (%)	
Family	113	75.33	115	76.67	96	64.00	324	72.00	
Government	24	16.00	29	19.33	21	14.00	74	16.44	
Others	13	8.67	6	4	33	22.00	52	11.56	
Total	150	100	150	100	150	100	450	100	

Panel B: Establishment of Audit Committee									
Audit Committee	Hong Kong		Singapore		Malaysia		ALL		
	N	Fraction (%)	N	Fraction (%)	N	Fraction (%)	N	Fraction (%)	
Yes	104	69.33	148	98.67	150	100	402	89.33	
No ⁽¹⁾	46	30.67	2	1.33	0	0	48	10.67	
Total	150	100	150	100	150	100	450	100	

Panel C: Percentage of Independent Directors on the Audit Committee									
Proportion of independence	Hong Kong		Singapore		Malaysia		ALL		
	N	Fraction (%)	N	Fraction (%)	N	Fraction (%)	N	Fraction (%)	
0% ⁽²⁾	46	30.67	2	1.33	0	0.00	48	10.67	
0~1/3	2	1.33	1	0.67	9	6.00	12	2.67	
1/3~2/3	28	18.67	86	57.33	103	68.67	217	48.22	
2/3~1	4	2.67	17	11.33	28	18.67	49	10.89	
100%	70	46.67	44	29.33	10	6.67	124	27.56	
Total	150	100	150	100	150	100	450	100	

(1) Eight Hong Kong and two Singapore companies disclose that they have set up the audit committee, but no further details of composition and independence are given. We therefore classify them as having no audit committee.

(2) Firms with no audit committee are classified as having 0% independence.

Table 2: Summary of Variable Definition

All variables are recorded as the year of 2000, except the variable of ROA₁₉₉₉.

Variable name	Definition
Family control dummy	dummy variable with a value of one when the ultimate control type is family and a value of zero otherwise
Control (%)	proportion of votes controlled by the largest shareholder group
Ownership (%)	proportion of cash flow rights owned by the largest shareholder group
Excess Control (%)	The divergence between control rights and cash flow rights of the largest shareholder
Divergence dummy	dummy variable with a value of one when the variable of Excess Control is positive and a value of zero otherwise.
High cash flow dummy	dummy variable with a value of one for firms with above-median cash flow rights, and a value of zero otherwise.
Percentage of independent board members (%)	percentage of independent directors in the corporate board.
Number of board members	total number of directors
Percentage of independent audit committee members (%)	percentage of independent directors in the audit committee
Number of audit committee members	total number of audit committee members
DIFF	number of independent directors who do not serve in audit committee
Audit committee independence dummy	dummy variable with a value of one for a audit committee fully composed of independent directors, and zero otherwise.
Percentage of professional audit committee members (%)	percentage of professional independent directors in audit committee.
Audit committee profession dummy	dummy variable with a value of one for audit committee with above-50% professional independent directors and zero otherwise.
Chairman and CEO dummy	dummy variable with a value of one for CEO affiliated with the largest shareholder also serve as the chairman of the board, and zero otherwise
ROA ₁₉₉₉	return on asset in the year of 1999
Total assets	book value of total assets (in US\$ millions)
Leverage	ratio of book value of debt over book value of total assets
R&D	ratio of R&D expenditures over sales
Market-to-book ratio	market value of equity over book value of asset
CAR (%)	cumulative 12-month market-adjusted stock return in the year of 2000

Table 3: Descriptive statistics

From table 3 to 9, we analyze the 402 sample firms where have audit committee in the three countries.

Variables	Mean	Standard Deviation	Q1	Median	Q3
Control (%)	46.13	17.05	32.66	45.84	59.3
Ownership (%)	32.11	18.09	18.91	30.25	43.07
Excess Control (%)	14.02	13.68	0	12.55	24.495
Divergence dummy	0.681	0.467	0	1	1
Percentage of independent board members (%)	37.77	16.32	25	33.33	50
Number of board members	8.84	2.82	7	9	10
Percentage of independent audit committee members (%)	73.82	21.87	66.67	66.67	100
Number of audit committee members	3.11	0.93	3	3	3
DIFF	0.89	1.51	0	0	1
Audit committee independence dummy	0.3	0.46	0	0	1
Percentage of professional audit committee members (%)	45.09	35.42	0	50	66.67
Chairman and CEO dummy	0.53	0.5	0	1	1
Total assets (US\$ millions)	2,226	6,895	180	443	1237
Leverage (%)	48.5	25.7	28.3	45.9	68.7
R&D (%)	0.58	1.68	0.04	0.13	0.36
ROA ₁₉₉₉ (%)	5.37	10.74	1.4	4.41	9.14
Market-to-book ratio	0.914	1.086	0.296	0.56	1.02
CAR (%)	2.46	37.9	-21.2	-1.06	19.2

Table 4: Correlation of Audit Committee Independence and Professionalism with Other Variables of Interest

Variables	Percentage of independent audit committee members (%)		Percentage of professional audit committee members (%)	
	Coefficients	P value	Coefficients	P value
Family control dummy	-0.082	(0.097)*	-0.02	(0.681)
Ownership (%)	0.146	(0.003)***	-0.023	(0.637)
Excess Control (%)	-0.082	(0.098)*	-0.071	(0.151)
Percentage of independent board members (%)	0.063	(0.199)	0.029	(0.562)
Number of board members	0.035	(0.474)	0.009	(0.859)
Percentage of independent audit committee members (%)	---	---	0.106	(0.032)***
Number of audit committee members	-0.039	(0.433)	0.038	(0.442)
Chairman and CEO dummy	0.066	(0.182)	-0.113	(0.022)**
Total assets	-0.025	(0.062)	0.031	(0.53)
Leverage	-0.052	(0.29)	-0.059	(0.236)
R&D	0.096	(0.054)*	-0.108	(0.029)**
Market-to-book ratio	0.098	(0.046)**	-0.018	(0.718)
CAR (%)	0.099	(0.045)**	0.091	(0.066)*

Table 5: Univariate Analysis by Audit Committee Independence

Variables	Audit committee independence dummy	Mean	Std dev.	T-value for difference in means
Family control dummy	1	0.697	0.042	-0.909
	0	0.74	0.026	
Ownership (%)	1	36.7	17.98	3.391***
	0	30.16	17.81	
Excess Control (%)	1	11.55	12.8	-2.394**
	0	15.07	13.92	
Percentage of independent board members (%)	1	36.09	15.31	-1.36
	0	38.48	16.7	
Number of board members	1	9.38	3.17	2.323**
	0	8.62	2.64	
Number of audit committee members	1	2.63	0.66	-8.422***
	0	3.32	0.95	
Chairman and CEO dummy	1	0.607	0.491	1.95*
	0	0.502	0.501	
Total assets	1	2,504,367	7976719	0.486
	0	2,108,900	6395691	
Leverage	1	48.03	28.32	-1.139
	0	51.47	27.8	
R&D	1	0.569	2.075	1.81*
	0	0.21	0.965	
Market-to-book ratio	1	1.84	6.37	1.68*
	0	0.87	1.09	
CAR (%)	1	9.2	52.51	1.89*
	0	-0.38	29.49	

Table 6: Determinants of Independence and Professionalism of Audit Committee

Variables	Percentage of independent audit committee members (%)	Audit committee independence dummy	Percentage of professional audit committee members (%)
Intercept	0.739 (5.865)***	-2.627 (3.941)**	0.829 (3.941)***
Family control dummy	-0.037 (-1.264)	-0.053 (0.031)	-0.003 (-0.068)
Ownership	0.002 (1.976)**	0.019 (3.701)**	-0.002 (-0.922)
Excess control	-0.001 (-1.724)*	-0.017 (2.814)*	-0.002 (-0.977)
Percentage of independent board members (%)	0.059 (0.748)	-0.749 (0.748)	-0.131 (-1.039)
Number of board members	0.006 (1.196)	0.066 (1.468)	-0.011 (-1.362)
Percentage of independent audit committee members (%)			0.231 (2.737)***
Chairman and CEO dummy	0.035 (1.48)	0.54 (4.335)**	-0.055 (-1.739)*
Ln (total assets)	-0.005 (-0.512)	0.088 (0.884)	-0.014 (-0.972)
Leverage	-0.09 (-2.019)**	-0.915 (3.497)*	-0.038 (-0.528)
R&D	0.012 (1.453)	0.126 (0.2)	-0.019 (-1.364)
ROA ₁₉₉₉	-0.001 (-1.091)	0.002 (0.018)	-0.0001 (-0.054)
R ²	0.0754		0.1305
% Concordant		69.1	

Table 7: Determinants of Independence and Professionalism of Audit Committee

Variables	Percentage of independent audit committee members (%)		Audit committee independence dummy	
Intercept	0.714 (5.672)***	0.797 (6.443)***	-2.89 (4.785)**	-2.009 (2.407)
Family control dummy	-0.029 (-0.933)	-0.045 (-1.546)	0.061 (0.035)	-0.152 (0.253)
Ownership	0.003 (2.485)**		0.025 (5.157)**	
Excess control		-0.002 (-1.8)*		-0.026 (3.59)*
Ownership* divergence dummy	-0.002 (-1.675)*		-0.013 (2.707)*	
Excess control * high cash flow rights dummy		-0.0005 (-0.26)		0.005 (0.059)
Percentage of independent board members (%)	0.066 (0.831)	0.064 (0.805)	-0.709 (0.665)	-0.745 (0.742)
Number of board members	0.007 (1.408)	0.006 (1.134)	0.078 (2.035)	0.057 (1.115)
Chairman and CEO dummy	0.035 (1.471)	0.037 (1.571)	0.547 (4.43)**	0.565 (4.784)**
Ln (total assets)	-0.006 (-0.652)	-0.005 (-0.596)	0.073 (0.608)	0.089 (0.9)
Leverage	-0.086 (-1.933)*	-0.089 (-1.993)**	-0.867 (3.196)*	-0.913 (3.511)*
R&D and advertising intensity	0.013 (1.555)	0.011 (1.296)	0.135 (1.89)	0.113 (1.355)
ROA ₁₉₉₉	-0.001 (-1.092)	-0.001 (-0.909)	0.002 (0.2)	0.005 (0.116)
R ²	0.0644	0.0563		
% Concordant			66.1	66.3

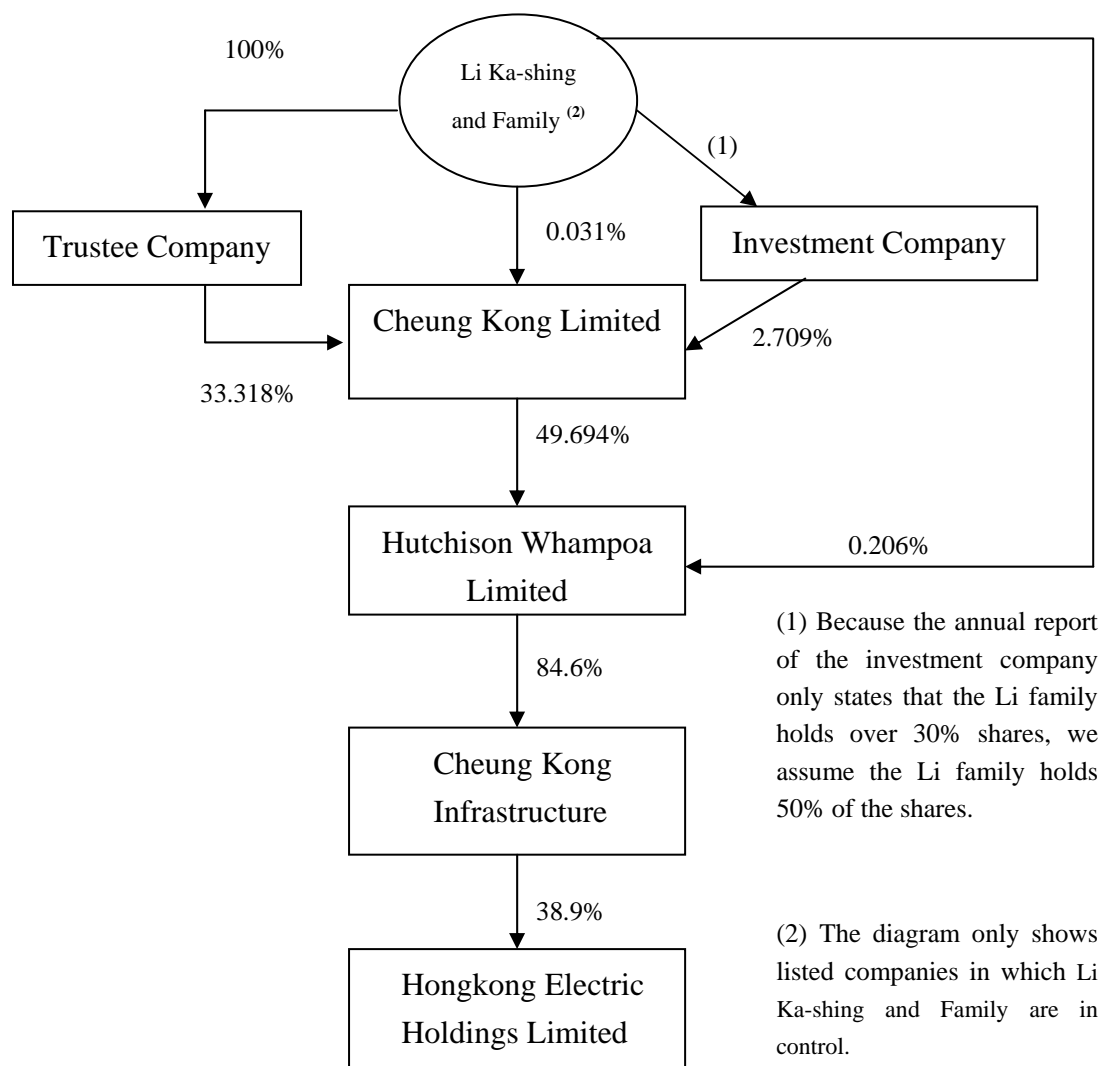
Table 8: Cross-sectional Regression Analysis of Adjusted Market-to-Book Ratios

Variables	Adjusted market-to-book ratio		
Intercept	5.069 (2.494)**	5.683 (2.769)***	6.947 (3.533)***
Family control dummy	0.053 (0.113)	0.063 (0.136)	-0.015 (-0.031)
Percentage of independent audit committee members (%)	1.55 (1.75)*	0.768 (0.786)	
Percentage of independent audit committee members * audit committee profession dummy		0.971 (1.874)*	
Percentage of professional audit committee members (%)			0.914 (1.62)
Percentage of professional audit committee members * audit committee independence dummy			1.614 (2.198)**
Number of board members	0.08 (1.019)	0.073 (0.927)	0.062 (0.777)
Chairman and CEO dummy	0.599 (1.501)	0.523 (1.309)	0.563 (1.41)
Ln (total assets)	-0.418 (-2.798)***	-0.44 (-2.943)***	-0.436 (-2.918)***
Leverage	-0.524 (-0.735)	-0.484 (-0.68)	-0.42 (-0.586)
R&D	0.017 (0.123)	-0.009 (-0.07)	0.008 (0.058)
R ²	0.0492	0.0581	0.0552

Table 9: Cross-sectional Regression Analysis of Cumulative Abnormal Returns

Variables	CAR		
Intercept	-0.462 (-2.199)**	-0.52 (-2.453)**	-0.375 (-1.866)*
Family control dummy	-0.004 (-0.964)	-0.005 (-0.107)	-0.008 (-0.176)
Percentage of independent audit committee members (%)	0.16 (1.751)*	0.142 (1.548)	
Percentage of independent audit committee members * audit committee profession dummy		0.093 (1.73)*	
Percentage of professional audit committee members (%)			0.017 (0.264)
Percentage of professional audit committee members * audit committee independence dummy			0.24 (3.192)***
Number of board members	0.016 (1.96)*	0.017 (2.049)**	0.014 (1.735)*
Chairman and CEO dummy	0.023 (0.554)	0.03 (0.727)	0.022 (0.536)
Ln (total assets)	0.019 (1.259)	0.021 (1.391)	0.019 (1.263)
Leverage	-0.063 (-0.85)	-0.066 (-0.905)	-0.037 (-0.508)
R&D	-0.03 (-2.154)**	-0.028 (-1.971)**	-0.029 (-2.088)**
R ²	0.0649	0.0724	0.0897

Appendix A: Ownership structure of Hong Kong Li Ka-shing Family Group



Li Ka-shing's family and a trustee company founded by the Li family directly own 33.4% of Cheung Kong Limited HK shares. Another investment company owns an additional 2.7% of Cheung Kong Limited shares. Because the annual report of the investment company only states that the Li family holds over 30% of the shares, we assume the Li family holds either 50% or 100% of the company in our calculations. This rule of thumb applies to any sample firm with similar situations. For the sake of brevity we only report values calculated assuming 50% ownership. Therefore, the Li's voting rights of Cheung Kong Limited are equal to 36.1%, which is the sum of

33.4% (direct control) and 2.7% (indirect control through the investment company). Likewise, their voting rights in Hutchison Whampoa Limited, Cheung Kong Infrastructure Holdings Limited, and Hongkong Electric Holdings Limited are equal to 36.3%, 36.1%, and 36.1%, respectively.¹¹

The variable “cash flow rights” is constructed to measure the controlling shareholder’s percentage ownership of the profits or losses and dividends of a firm. A high percentage of ownership by the controlling shareholder provides a strong incentive to maximize the value of the firm and minimize agency misconduct. If there are multiple chains of ownership, then the cash flow rights along each chain are the products of all of the ownership rights in the intermediate companies in that chain. The total cash flow rights are then equal to the sum of all of the cash flow rights from all of the ownership chains (Claessens *et al.*, 2000). In Figure 1, the cash flow rights in Cheung Kong Limited turns out to be 34.7%, which equals 0.031% (Li family’s direct cash flow rights) plus $33.318\% \times 100\%$ (Li family’s portion of cash flow rights in the trustee company) and $2.709\% \times 50\%$ (Li family’s portion of cash flow rights in the investment company). The other three companies’ cash flow rights can be derived from taking the product of the ownership stakes along the chain of Cheung Kong Limited. Therefore, cash flow rights for the Li family in Hutchison Whampoa Limited is 17.452% [$(34.704\% * 49.694\%) + 0.206\%$]; 14.764% in Cheung Kong Infrastructure Holdings Limited ($17.452\% * 84.6\%$); and 5.743% in Hongkong Electric Holdings Limited ($14.764\% * 38.9\%$).

¹¹ These are calculated using the weakest link in the chain as the $Min[49.7\%, 36.1\%] + 0.2\%$; the $Min[84.6\%, (\min[49.7\%, 36.1\%] + 0.2\%), 36.1\%]$; and the $Min[38.9\%, 84.6\%, (\min[49.7\%, 36.1\%] + 0.2\%), 36.1\%]$, respectively.