

Corporate Governance and the Informativeness of Accounting Earnings: The Role of the Audit Committee

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Abstract

Policy makers around the world have focused on corporate governance reforms since the Asian Financial Crisis and debacles, such as Enron, in the U.S. In particular, policy makers have focused on establishing independent audit committees to improve investor confidence in reported accounting information. For a sample of East Asian companies, we find that the negative relation between concentrated control and earnings informativeness documented prior to the Asian financial crisis persists in a more recent period when many corporate governance reforms have been adopted to presumably improve financial disclosures. We do however find that earnings informativeness is strengthened by the independence of a firm's audit committee, but these results seem to be driven by independent directors with financial expertise. Moreover, the increased reliability associated with the combination of financial expertise and objectivity appears to more than offset the detrimental effect associated with concentrated control. The results in this paper suggest that the emphasis on audit committee independence alone may not be enough. Instead, focusing on both the financial expertise and objectivity of directors appointed to the audit committee may be a more fruitful way to increase investor confidence in accounting information, especially when ownership is concentrated.

Keywords: Corporate Governance; Ownership; Earnings Informativeness; Audit Committee

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1. Introduction

Research indicates that poor corporate governance is partly to blame for the Asian financial crisis (e.g., Johnson et al., 2000). As a result, emphasis has been given to strengthening the independence and oversight role of the board of directors among Asian countries. The establishment of an audit committee on the board, and particularly its independence, has been high on the agenda in hopes of reducing information asymmetry between controlling shareholders and other investors. Most East Asian governments are heeding the advice to require all publicly listed companies to set up their own audit committees but little is known about what role the audit committee might play. Before putting this mandatory requirement into practice, policy makers may first like to know how the audit committee relates to the quality of accounting information from investors' perspectives.

Because of the prevalence of concentrated ownership in East Asian companies (Claessens, Djankov, and Lang, 2000), controlling shareholders are believed to have opportunistic incentives to take advantage of weak domestic legal systems and ineffective corporate governance mechanisms to increase their own wealth at the expense of minority shareholders (Shleifer and Vishny, 1997; La Porta et al., 1999; Johnson et al., 2000). The tactical use of pyramidal and cross-holding ownership structures exacerbate the problem because it results in a deviation of cash flow rights from voting rights.¹ Controlling shareholders are able to take control in excess of what they would have without complicated ownership structures. The negative entrenchment effect therefore emerges from greater opportunistic incentives. Thus, accounting reports overseen by controlling shareholders may be less credible and associated with poor informativeness of earnings (Fan and Wong, 2002).

Fan and Wong (2002) develop an additional argument predicting a negative relation between the concentration of control and earnings informativeness based on proprietary information and human specific capital. Concentrated control directs the decision rights to a small group of people who possess specific knowledge (Jensen and Meckling, 1992; Christie et al., 2002.), which prevents confidential information from leaking out and reduces the transaction cost of knowledge. To the extent concentrated

¹ 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.

control naturally establishes a barrier of information flow to the populace and discourages external competition, concentrated control would be associated with opaque financial reporting and low earnings informativeness.

The negative relation found between control concentration and earnings informativeness in Fan and Wong (2002) are based on data prior to 1997 before some East Asian countries adopted policies on audit committees. Thus, a natural question is whether the negative relation between the concentration of control and earnings informativeness persists in East Asia when most firms have audit committees. If so, do certain audit committee characteristics increase earnings informativeness and offset the negative effect associated with concentrated control? The audit committee primarily oversees the firm's financial reporting process. It meets regularly with the firm's outside auditor and internal financial manager to review the corporation's financial statements, audit process, and internal accounting controls. In addition, investors can directly observe audit committee existence, independence, and composition from annual reports. When assigning directors to an audit committee, controlling shareholders may be able to increase the credibility of accounting earnings reports and hence earnings informativeness by choosing independent legal and financial professionals if these members' objectivity and professional backgrounds are viewed as contributing to high-quality financial statements. Any negative entrenchment or information effect associated with concentrated control might then be mitigated by any improvement in transparency and overall accounting quality.

This paper explores the relation between the informativeness of accounting earnings and both ownership structure and audit committee composition. We examine 450 companies, which include the 150 publicly listed firms with the largest market value from each Hong Kong, Singapore and Malaysia. Consistent with Fan and Wong (2002), we find that the more voting rights controlling shareholders hold, the lower the relation between earnings and cumulative abnormal stock returns even though the majority of our sample firms have audit committees. However, the convergence between the cash flow rights and voting rights of controlling shareholders is not significantly related to earnings informativeness in our sample. Second, a greater percentage of both independent directors and directors with professional expertise on the audit committee is associated with greater earnings informativeness. The results suggest that the combined effect of independence and professional background on

earnings informativeness is greater than that of independence alone. Moreover, the positive effect on earnings informativeness associated with a higher proportion of independent professional directors on the audit committee appears to offset any negative effects on earnings informativeness associated with controlling shareholders having a high level of voting rights. Finally, the results appear to be driven by the sub-sample of firms with high ownership concentration levels. The results are not significant for the sub-sample of firms with low ownership concentration.

Taken together, these results suggest that the audit committee can play a significant role when concentrated ownership is associated with pyramids and cross-holdings (i.e., controlling shareholders have greater ability to expropriate wealth and hide it or protect proprietary information). In particular, establishing an audit committee with independent directors having legal or financial expertise is more important than focusing on independence alone. The audit committee role appears to be less significant when ownership is less concentrated.

The remainder of the paper is organized as follows. Section 2 develops the hypothesis tested in the paper. Section 3 describes the sample and summary statistics. Section 4 reports the empirical analysis. Section 5 concludes.

2. Development of Hypothesis

2.1 Ownership Structure and Audit Committee Characteristics

The ownership of listed companies in most countries is typically concentrated in the hands of controlling shareholders or an ultimate owner. Fan and Wong (2002) summarize two effects, entrenchment and information effects, resulting from concentrated ownership that are presumably detrimental to earnings informativeness. In their study of seven East Asian economies, Fan and Wong find that earnings informativeness is significantly negatively related to the ultimate owner's control level, conditional on the owner having gained effective control. They also find that earnings informativeness is significantly negatively related to the degree of divergence between the ultimate owner's control and equity ownership level. This lends support to the argument that controlling shareholders who want to protect proprietary information use stock pyramids or cross-shareholdings to leverage their control, thus creating a

divergence between ownership and control. We are interested in whether the results in Fan and Wong persist in a more recent time period when countries have adopted stricter corporate governance policies and whether audit committee independence and composition are able to offset the negative impact on earnings reliability of concentrated control if it persists.

Beasley (1996) reports that the incidence of financial statement fraud is lower for firms where the proportion of outside directors is relatively high; however, the existence of an audit committee does not appear to matter. On the other hand, McMullen (1996) provides evidence that firms with reliable financial reporting (i.e., the absence of errors, irregularities and illegal acts) are more likely to have audit committees. Furthermore, Carcello and Neal (2003) find that audit committees with greater independence, greater governance expertise, and lower stockholdings are more effective in shielding auditors from dismissal after the issuance of new going-concern reports. Klein (2002) finds that audit committee independence is lower for firms reporting consecutive losses. In addition, Xie et al. (2003) find that board and audit committee activity and their members' financial sophistication may be important factors in constraining the propensity of managers to engage in earnings management. These results suggest that boards structured to be more independent of the CEO or with more financial sophistication are more effective in monitoring the corporate financial accounting process, and some evidence suggests that certain characteristics of the audit committee may be related to an environment that is more conducive to reducing asymmetry in accounting information.

Given that Fan and Wong find that earnings are less reliable when control is concentrated, we therefore analyze whether certain characteristics of the audit committee are associated with more reliable earnings, especially when ownership is concentrated. Chen and Jaggi (2000) find that the ratio of independent non-executive directors to the total number of directors on corporate boards as a whole is positively associated with the comprehensiveness of financial disclosures sampled by Hong Kong listed companies. To the extent more comprehensive financial disclosures are associated with more reliable earnings, we might expect the presence of independent non-executive directors (i.e., legal or financial professionals) on the audit committee, in particular, to be positively associated with the reliability or informativeness of earnings.

Hypothesis 1: Audit committee independence and financial sophistication strengthen earnings informativeness.

Hypothesis 2: The incremental effect of audit committee independence and financial sophistication on earnings informativeness mitigates the negative impact of concentrated ownership on earnings informativeness.

2.2 Substitute or Complement Hypothesis

La Porta et al. (2002) and Claessens et al. (2002) report that higher levels of cash flow rights align the interests of controlling shareholders with minority shareholders because the benefits of increasing shareholder wealth outweighs foregoing expropriation. This interest alignment encourages controlling shareholders to run the business properly giving rise to the positive incentive effect. To the extent investors can identify high cash flow rights without excessive voting rights they will associate high ownership concentration with aligned incentives, and it may not be necessary to incur the extra costs to set up an independent audit committee. On the other hand, if it is difficult for investors to disentangle cash flow rights from control rights, controlling shareholders with high levels of ownership concentration may be associated with misaligned incentives or viewed as protecting proprietary information. In this case, establishing an audit committee with independent professionals may be associated with more reliable reported earnings and a stronger corporate governance system even though investors are unsure of the controlling shareholder's incentives.

Hypothesis 3a: Companies with controlling shareholders holding high levels of cash flow rights do not need the audit committee to strengthen earnings informativeness. They are viewed as substitutes.

Hypothesis 3b: Companies with controlling shareholders holding high levels of cash flow rights can strengthen earnings informativeness through the establishment of an audit committee. They are viewed as complements.

3. Sample and summary statistics:

3.1 Sample

The sample in the paper covers the largest 150 listed companies, based on market values from annual reports for the fiscal year 2000, each in three East Asian countries—Hong Kong, Singapore, and Malaysia. This results in a sample size of 450. We focus on these three East Asian countries because of their similar ownership structures and corporate governance environments.² Concentrated ownership and family control are common, and the corporate governance environment is associated with a majority of companies listed in these countries having audit committees.³ This combination is of particular interest to us because the results in Fan and Wong suggest that earnings are less reliable when ownership is concentrated and we would like to examine whether the relation persists in a more recent time period when stricter corporate governance policies have been adopted. Because data on audit committee composition are available in these countries, we are also able to examine whether the composition of the audit committee is associated with improved earnings reliability when ownership is concentrated.

3.2 Descriptive Statistics on Ownership Structure and Audit Committees

Data on ownership and audit committee composition are obtained from annual reports. Financial figures and stock returns are obtained from Datastream and Compustat. Table 1 presents broad descriptive statistics on ownership structure and audit committee independence by country. Panel A indicates that 72% of the sample is characterized by family control, and this is similar in all three countries. Panel B indicates that 89% of the sample has an audit committee with data available on audit committee composition. The remaining companies either do not have an audit committee (8%) or have an audit committee without data on composition (2%) and are primarily confined to Hong Kong.

² These countries have either 4 or 5 provisions in place out of 6 to protect shareholders' rights, compared to an average score of 4 for common law countries and 5 for the U.S. (La Porta et al., 1998). In addition, Credit Lyonnais Securities Asia rated these three countries near the top of ten Asian emerging markets in 2004 based on the following five dimensions: rules and regulations; enforcement; political/regulatory interference; international Generally Accepted Accounting Principles; institutional mechanisms and corporate governance culture.

³ All companies listed in both Singapore and Malaysia are required to have an audit committee where at least a majority of the members and the chairman must be independent. In Hong Kong, the Code of Best

Panel C presents data on audit committee independence. The 48 firms with no audit committee or missing data are treated as having zero independence. Even though Hong Kong has the highest proportion of companies with no audit committee or with zero independence (31%), Hong Kong also has the highest proportion of companies with audit committees comprised 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. In contrast to Hong Kong, the majority of companies in Singapore and Malaysia have audit committees with the proportion of independent directors ranging between 33% and 66%. Panel A of Table 2 indicates that most of these committees are closer to 66% independent than 33%. The audit committees tend to include three directors, with all of the directors being independent in 28% of the sample and 67% being independent in at least 47% of the sample. Thus, independent directors represent the majority in at least 75% of the audit committees.

Panel B of Table 2 contains more specific information on the composition of the audit committees. Following Xie et al. (2003), we further classify independent directors according to their professional background. Corporate directors are defined as independent directors who are currently or previously employed as executives in other publicly held corporations. Financial directors are defined as independent directors who are current or past executives in a financial institution, or Certified Public Accountants.⁴ Legal directors are defined as independent directors who also practice law. We look at both the proportion of audit committee seats held by each type of independent director and whether a particular type of independent director is represented on an audit committee. Finally, we define a Majority Professional Directors indicator variable, which equals one when 50% or more of the directors on a firm's audit committee are either a Financial or Legal director as defined above.

Practices recommends listed firms to establish and disclose the existence of audit committees, or to give reasons why they do not exist, in their annual reports.

⁴ 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.

Corporate and Financial directors are the most common types of independent directors appointed to audit committees. On average, 29% of directors on audit committees are Corporate directors and 33% are Financial directors. In contrast, only 9% of directors appointed to audit committees are Legal directors. Moreover, 56% of audit committees appoint at least one Financial director but only 19% of audit committees appoint at least one Legal director. When considering both majority independence and professional backgrounds, we find that at least 50% of the directors appointed to the audit committee are either Financial or Legal directors in 39% of the firms.

3.3 Control and Ownership

Following La Porta et al. (1999) and Claessens et al. (2000), we consider both direct and indirect control when calculating the control or voting rights of a firm's ultimate owner or controlling shareholder. Direct control includes the voting rights through shares registered in the name of the controlling shareholder. Indirect control includes voting rights through shares held by entities that the controlling shareholder controls. For each company, we carefully trace the chains of control through the relationships for a specific group, if there is one, all the way back to the ultimate controllers. The ultimate controller(s) could be a family or an individual, the State, a widely held financial institution, a widely held corporation, or other as defined in La Porta et al. (1999). After identifying this information, all information is converted into a clear group map detailing the ultimate controller and interlocking stakes between firm groups. 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 example in Diagram 1 illustrates how both direct and indirect voting rights are calculated. 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.⁵

In contrast, 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 ($14.764\% * 38.9\%$).

Panel C of Table 3 shows that, consistent with other studies, ownership is concentrated and there is a divergence between cash flow ownership and control. The average (median) voting rights of controlling shareholders in our sample is 46.5% (46.6%), but the average (median) cash flow rights is lower at 32.8% (30.5%). Thus, cash flow rights only account for 69.8% of voting rights on average.⁶

4. Empirical results

We follow the methodology in Fan and Wong to examine the relation between certain aspects of audit committee composition and earnings informativeness, controlling for other factors in a multivariate analysis. In order to test earnings informativeness conditional on ownership structure, audit committee independence and composition, the following regression model is constructed:

⁵ 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.

⁶ If we assume 100% ownership in investment companies rather than 50% ownership, the divergence between cash flow and voting rights would be smaller. In this case, cash flow rights would represent 86.7% of voting rights.

$CAR = f(\text{Earnings and Earnings interacted with: Ownership Structure, Audit Committee Characteristics, and other control variables}),$

where CAR is the cumulative 12-month market adjusted stock returns (2000 May to 2001 April).

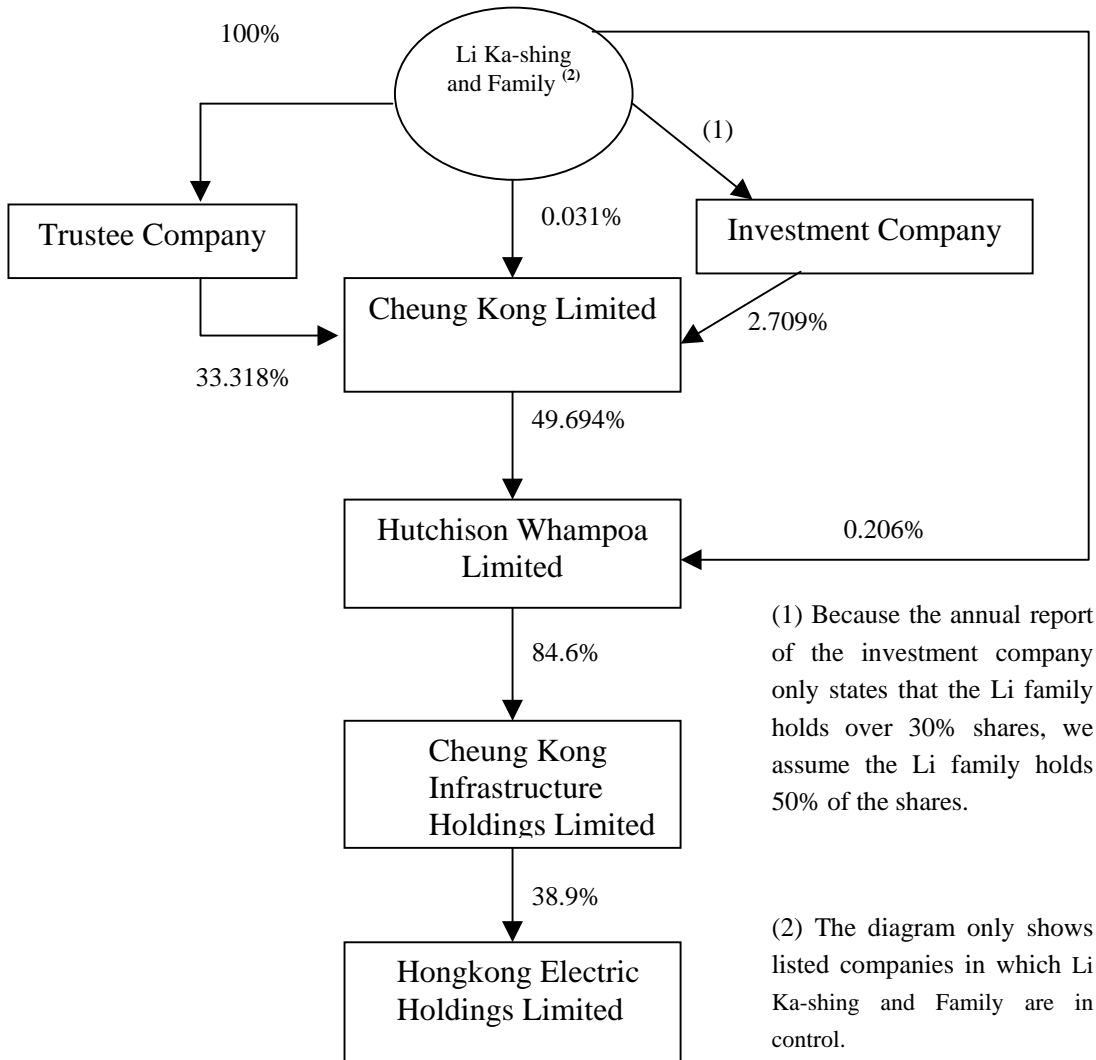


Diagram 1: HK Li Ka-shing and Family Group – A Typical Example of a Pyramidal Structure

Earnings is net earnings reported for fiscal year 2000 divided by the market value of equity at the beginning of 2000. Following Fan and Wong, we examine two aspects of ownership structure: level of voting rights and the divergence between cash flow and voting rights. Voting Rights are defined as the controlling shareholders' voting

rights for the firm, and Cash Flow to Voting Rights is the ratio of cash flow to voting rights for the controlling shareholder. If the stricter corporate governance policies adopted by East Asian firms in more recent years has improved financial disclosure, we would expect the negative relation between concentration of control and earnings informativeness to be weaker. We additionally include a set of control variables similar to those used in Fan and Wong to control for observed variations in the earnings-return relation that result from causes other than ownership structure and audit committee independence or composition. Firm size is measured as the natural log of a firm's book value of total assets. Leverage is defined as the ratio of the book value of debt to total assets. The Market-to-Book ratio is defined as the market value of equity over book value of asset and represents the growth opportunity. Finally, we include dummy variables to control for both country- and industry-level fixed effects. Industries are classified according to Claessens, Djankov and Lang (2000). The fixed effects are not reported in the tables for the sake of brevity.

4.1 The Effects of Audit Committee Independence

We define two measures of audit committee independence to examine the effects of independence on earnings informativeness. %Audit Committee Independence is the ratio of independent directors to the total number of directors appointed to the audit committee, 100% Audit Committee Independence dummy is equal to one when a company's audit committee consists entirely of independent directors and zero, otherwise. The results are reported in Table 3. Consistent with Fan and Wong, we find a negative coefficient for earnings conditional on voting rights and a positive coefficient for earnings conditional on cash flow to voting rights, but only voting rights is significant. Thus, the negative relation between the earnings-return relationship and voting rights persists in our sample even though the corporate governance policies of these countries have presumably been improved. One of these changes has been the increased independence of audit committees. We do find a significant positive coefficient for earnings interacted with both measures of audit committee independence, indicating the earnings-return relationship is stronger when independence is higher.

4.2 The Effects of Audit Committee Composition

In Table 4, we examine whether independence alone is effective or whether independence combined with certain professional experience is associated with more reliable accounting information. We create four variables to capture different combinations of independence and professional background represented on an audit committee: %Corporate directors is defined as the ratio independent Corporate directors to the total number of directors on the audit committee; %Financial directors is defined as the ratio of independent Finance directors to the total number of directors on the audit committee; %Legal directors is defined as the ratio of independent legal directors to the total number of directors on the audit committee; and Professional Majority dummy is set equal to one if 50% or more of the directors on the audit committee are independent and are classified as either a Finance or Legal director and is set to zero, otherwise. Consistent with papers on board composition, the results indicate that the composition of the audit committee is more important than simple independence even though independence receives the most attention by policy makers. The earnings-return relation does not improve with the proportion of independent corporate directors, but it does improve with the proportion of both independent Financial and Legal directors. Thus, investors appear to associate independent directors with more financial expertise and objectivity with more reliable reported earnings.

4.3 The Effects of Audit Committee Composition versus Control

In Table 5 we examine whether the increase in earnings informativeness associated with financial sophistication and independence on the audit committee composition is enough to offset the detrimental effect associated with concentrated control. We interact our four measures of audit committee composition with voting rights and earnings. Similar to the results in Table 4, we find significant positive coefficients for interactions with audit committees comprised of more independent Finance or Legal directors. In all cases the coefficient for the audit committee interactions is larger than the coefficient when voting rights is included alone. For example, the coefficient for the interaction of voting rights and earnings is -.50 in specification 4, but the coefficient when the Professional Majority dummy is

additionally interacted is 1.23. These results suggest that appointing a majority of independent directors with financial sophistication is associated with more reliable reported earnings, and this certification more than offsets the detrimental effect on earnings informativeness associated with concentrated control. Our results also suggest that independence alone is not sufficient to increase reliability of reported earnings. The composition of the audit committee is important. Independent directors who are executives at other companies are not associated with a stronger earnings-return relationship. The increase is only found for independent directors either from the financial or legal professions, those presumably with more financial sophistication and more objectivity.

4.4 The Effects of Audit Committee Composition According to Level of Cash Flow Rights

Our earlier results indicate that earnings informativeness is weakened when a firm's ultimate owner has a higher level of control rights, but the divergence between control and cash flow rights is not significant. These results provide indirect support for the complement hypothesis suggesting that firms can increase earnings informativeness even when the ultimate owner has high cash flow rights. This may be because it is either difficult for investors to measure the divergence between cash flow and voting rights or because high cash flow rights are also associated with protecting proprietary information. Related to the latter reason, note that the earning-return relation may be weaker when proprietary information is protected even when this private information is associated with higher returns. For example, the incentives of an ultimate owner with high cash flow rights may be aligned with other shareholders and they still may choose to hide certain information if it is associated with the company receiving favorable kickbacks (as long as the kickbacks are kept confidential). We provide a more direct test of the substitute and complement hypotheses between cash flow rights and audit committee composition in this section.

4.4.1 Comparison of market-adjusted returns

We begin by examining the CARs according to different levels of cash flow

rights and audit committee characteristics. First, we divide the sample into High and Low Cash Flow Rights sub-samples based on the median cash flow rights for the full sample. In Panel A of Table 6, we further divide the High and Low Cash Flow Rights sub-samples according to whether the audit committee is 100% independent or not. The results in Panel A suggest that firms with high cash flow rights and 100% audit committee independence have the highest average 12-month market-adjusted returns, but the difference is only marginally significant when compared to firms with low cash flow rights and lower audit committee independence. Panel B divides the High and Low Cash Flow Rights sub-samples according to whether a majority of the audit committee is comprised of independent directors from either the financial or legal profession. In contrast to the results in Panel A, firms with high cash flow rights and audit committees comprised with a majority of financially sophisticated independent directors have the highest average 12-month market-adjusted returns, and it is significantly greater than all other sub-samples. Thus, firms with high cash flow rights are associated with higher returns, especially when the audit committee consists of a majority of independent directors with financial expertise. Do these firms also have a stonger earnings-return relationship?

4.4.2 The effects of audit committee composition according to cash flow rights

The results in Table 6 indicate that audit committee composition is significantly related to higher abnormal returns even when cash flow rights are higher. In this section we examine whether audit committee composition is also significantly related to increased earnings informativeness. We re-run the regression analysis of audit committee composition and earnings informativeness separately for the High and Low Cash Flow Rights sub-samples. The results for the High Cash Flow Rights sub-sample are presented in Table 7. Similar to the results for the full sample, we find significant, positive coefficients for earnings interacted with the proportion of independent financially sophisticated directors on the audit committee for firms characterized by high cash flow rights. No significant relation is found for independent executive directors. In contrast, the results in Table 8 indicate that audit committee composition is not significantly related to earnings informativeness for firms characterized by low cash flow rights. Taken together, the results in Tables 7 and 8 support the complement

hypothesis but do not support the substitute hypothesis. Audit committee composition does not appear to provide a substitute mechanism for verifying the accuracy of reported earnings when incentives may be misaligned, i.e., when cash flow rights are low. Instead, audit committee composition appears to provide a complementary mechanism for verifying the accuracy of reported earnings when earnings are viewed as being more opaque due to concentrated ownership and control.

5. Conclusion

Much attention has been focused on corporate governance reforms by policy makers in East Asia since the Asian financial crisis. In particular, policy makers have focused on establishing independent audit committees. Similar policies have recently been adopted in the U.S. following debacles such as Enron. The basic argument underlying this push is that capital markets will be stronger when confidence in accounting information is greater, and the audit committee is a natural place to look to improve the perceived quality of accounting information.

We examine a sample of 450 firms in three East Asian companies in 2000 to see whether audit committee independence is associated with stronger earnings informativeness as measured by the earnings-return relationship. Interestingly, we find that the negative relation between concentrated control and earnings informativeness documented in Fan and Wong (2002) prior to the Asian financial crisis persists in a more recent time period when many corporate governance reforms have been adopted to improve financial disclosures. We do however find that earnings informativeness is strengthened by the independence of a firm's audit committee, but these results seem to be driven by independent directors with financial expertise. We find no significant effect for executive independent directors. Thus, independence combined with financial expertise appears to be more effective in instilling investor confidence than independence alone. Moreover, the increased reliability associated with the combination of financial expertise and objectivity appears to more than offset the detrimental effect associated with concentrated control. Further analysis indicates that audit committee composition plays a more significant role in firms with concentrated ownership in East Asia. We find no significant audit committee effect for firms with low ownership concentration.

The results in this paper have important policy implications. They suggest that the emphasis on audit committee independence may not be enough. Instead, focusing on both the financial expertise and objectivity of directors appointed to the audit committee may be a more fruitful way to increase investor confidence in accounting information, especially when ownership is concentrated.

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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: Proportion 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. Audit Committee Characteristics and Ownership Structure

The sample consists of 450 firms from Hong Kong, Singapore, and Malaysia. Panel A presents descriptive statistics on audit committee independence. Panel B presents statistics on the audit committee composition. Corporate directors are defined as independent directors who are currently or previously employed as executives in other publicly held corporations. Financial directors are defined as independent directors who are current or past executives in a financial institution, or Certified Public Accountants. Legal directors are defined as independent directors who also practice law. Financial (Legal) director represented equals one when at least one Financial (Legal) director sits on the audit committee. Majority Professional Directors equals one when at least 50% of the audit committee is represented by either Financial or Legal Directors. Panel C presents statistics on ownership structure. Voting rights is the sum of direct and indirect voting rights, where direct rights are calculated as the sum of the fraction of shares registered to the ultimate controller and indirect rights are calculated as the weakest link in the chain of shares held by firms controlled by the ultimate owner.

Variables	Average	Std Dev	Q1	Median	Q3
A. Audit Committee Independence					
Number of independent directors	2.104	0.967	2	2	3
Proportion of independent directors	0.676	0.293	0.67	0.67	1
100% Independence	0.276	0.446	0	0	1
B. Audit Committee Profession					
Proportion of Corporate directors	0.289	0.263	0	0.34	0.34
Proportion of Financial directors	0.325	0.324	0	0.33	0.67
Proportion of Legal directors	0.085	0.189	0	0	0
Financial director represented	0.564	0.496	0	1	1
Legal director represented	0.188	0.392	0	0	0
Majority Professional Directors	0.393	0.451	0	0	1
C. Ownership Structure					
Voting rights (%)	46.477	17.095	32.8	46.56	59.56
Cash flow rights (%)	32.56	18.483	19.148	30.475	43.52
Cash flow to Voting rights	0.698	0.277	0.5	0.645	1

Table 3: The Effects of Audit Committee Independence

This table presents a regression analysis of the relation between audit committee independence and earnings informativeness as measured by the earnings-return relation. The dependent variable, CAR, is the cumulative 12-month market-adjusted stock return for 2000 (2000 May to 2001 April). Earnings equals net earnings reported for 2000 divided by the market value of equity at the beginning of 2000; Voting rights is described in Table 2; Cash Flow-to-Voting Rights is the ratio of the ultimate owner's cash flow rights to voting rights; %Audit Committee Independence is the number of independent directors over the total number of directors on the audit committee; 100% Audit Committee Independence Dummy equals one when a company's audit committee consists entirely of independent directors; Size is the natural logarithm of the market value of assets in millions of U.S. dollars at the beginning of 2000, Market-to-Book is the market value of equity divided by the book value of total assets at the beginning of 2000; and Leverage is total liabilities divided by total assets at the beginning of 2000. All regressions include dummy variables to control for country and industry effects (not reported). T-values are reported in parentheses. ***, **, * represent significance at the 1%, 5%, and 10% level, respectively.

Independent variables	Dependent variable: CAR		
Intercept	-17.59 (-3.39)***	-18.077 (-3.48)***	-17.665 (-3.41)***
Earnings	1.285 (2.52)***	0.538 (0.73)	1.155 (2.20)**
Earnings*Voting Rights	-0.828 (-2.50)***	-0.671 (-1.92)*	-0.508 (-1.69)*
Earnings*Cash Flow-to-Voting Rights	0.326 (1.10)	0.542 (1.62)	0.306 (1.24)
Earnings*% Audit Committee Independence		0.335 (1.72)*	
Earnings*100% Audit Committee Independence Dummy			0.183 (2.10)**
Earnings*Size	-0.057 (-1.47)	-0.005 (-0.13)	-0.063 (-1.60)
Earnings*Leverage	0.047 (0.15)	0.09 (0.30)	0.079 (0.26)
Earnings*Market-to-Book	0.257 (1.76)*	0.320 (2.17)**	0.226 (1.52)
R ² (%)	21.64	22.00	21.86
N	450	450	450

Table 4: The Effects of Audit Committee Composition

This table presents a regression analysis of the relation between audit committee composition and earnings informativeness as measured by the earnings-return relation. The dependent variable, CAR, is the cumulative 12-month market-adjusted stock return for 2000 (2000 May to 2001 April). Earnings equals net earnings reported for 2000 divided by the market value of equity at the beginning of 2000; Voting rights is described in Table 2; Cash Flow-to-Voting Rights is the ratio of the ultimate owner's cash flow rights to voting rights; %Corporate directors the number of independent directors who are currently or previously employed as executives in other publicly held corporations over total number of directors on the audit committee; %Financial directors is the number of independent directors who are current or past executives in a financial institution or Certified Public Accountants over the total number of directors on the audit committee; %Legal directors is the number of independent directors who also practice law over the total number of directors on the audit committee; Majority Professional Directors Dummy equals one when at least 50% of the audit committee is represented by either Financial or Legal Directors; Size is the natural logarithm of the market value of assets in millions of U.S. dollars at the beginning of 2000, Market-to-Book is the market value of equity divided by the book value of total assets at the beginning of 2000; and Leverage is total liabilities divided by total assets at the beginning of 2000. All regressions include dummy variables to control for country and industry effects (not reported). T-values are reported in parentheses. ***, **, * represent significance at the 1%, 5%, and 10% level, respectively.

Independent variables	Dependent variable: CAR			
Intercept	-17.757 (-3.41)***	-17.663 (-3.42)***	-17.646 (-3.41)***	-17.864 (-3.47)***
Earnings	1.063 (1.56)	1.003 (1.88)*	0.958 (1.77)*	0.828 (1.55)
Earnings*Voting Rights	-0.847 (-2.54)***	-0.457 (-1.16)	-0.556 (-1.53)	-0.337 (-0.90)
Earnings*Cash Flow-to-Voting Rights	0.429 (1.19)	0.34 (1.15)	0.332 (1.12)	0.463 (1.55)
Earnings*%Corporate Directors	0.198 (0.49)			
Earnings*%Financial Directors		0.513 (1.74)*		
Earnings*%Legal Directors			0.866 (1.80)*	
Earnings*Majority Professional Dummy				0.514 (2.68)***
Earnings*Size	-0.05 (-1.21)	-0.061 (1.56)*	-0.055 (-1.41)	-0.066 (-1.60)
Earnings*Leverage	0.056 (0.18)	0.066 (0.21)	0.202 (0.36)	0.233 (0.74)
Earnings*Market-to-Book	0.257 (1.76)*	0.249 (1.70)*	0.252 (1.72)*	0.247 (1.70)*
R ² (%)	21.69	22.20	22.23	22.94
N	450	450	450	450

Table 5: The Effects of Audit Committee Composition Versus Control

This table presents a regression analysis of the relation between audit committee composition and voting rights on earnings informativeness as measured by the earnings-return relation. The dependent variable, CAR, is the cumulative 12-month market-adjusted stock return for 2000 (2000 May to 2001 April). Earnings equals net earnings reported for 2000 divided by the market value of equity at the beginning of 2000; Voting rights is described in Table 2; %Corporate directors the number of independent directors who are currently or previously employed as executives in other publicly held corporations over total number of directors on the audit committee; %Financial directors is the number of independent directors who are current or past executives in a financial institution or Certified Public Accountants over the total number of directors on the audit committee; %Legal directors is the number of independent directors who also practice law over the total number of directors on the audit committee; Majority Professional Directors Dummy equals one when at least 50% of the audit committee is represented by either

Financial or Legal Directors; Size is the natural logarithm of the market value of assets in millions of U.S. dollars at the beginning of 2000, Market-to-Book is the market value of equity divided by the book value of total assets at the beginning of 2000; and Leverage is total liabilities divided by total assets at the beginning of 2000. All regressions include dummy variables to control for country and industry effects (not reported). T-values are reported in parentheses. ***, **, * represent significance at the 1%, 5%, and 10% level, respectively.

Independent var	Dependent var: CAR			
Intercept	-17.289 (-3.33)***	-17.993 (-3.49)***	-18.03 (-3.49)***	-18.12 (-3.53)***
Earnings	1.414 (2.06)**	0.917 (1.84)*	0.906 (1.79)*	0.77 (1.53)
Earnings*Voting Rights	-0.699 (-1.77)*	-0.542 (-1.55)	-0.653 (-1.91)*	-0.502 (-1.45)
Earnings*Voting Rights*%Corporate Directors	-0.314 (-0.58)			
Earnings*Voting Rights *%Financial Directors		1.426 (2.41)**		
Earnings*Voting Rights *%Legal Directors			1.891 (1.92)*	
Earnings*Voting Rights *Majority Professional Dummy				1.23 (2.99)***
Earnings*Size	-0.052 (-1.09)	-0.031 (-1.04)	-0.028 (-0.91)	-0.026 (-0.88)
Earnings*Leverage	0.016 (0.05)	-0.045 (-0.15)	0.097 (0.31)	0.062 (0.21)
Earnings*Market-to-Book	0.288 (2.01)**	0.285 (2.06)**	0.290 (2.09)**	0.305 (2.22)**
R ² (%)	21.48	22.47	22.09	23.03
N	450	450	450	450

Table 6. Comparison of Market-adjusted Returns According to Level of Cash Flow Rights and Audit Committee Composition

CAR is the cumulative 12-month market-adjusted stock return for 2000 (2000 May to 2001 April). High and Low Cash Flow Rights sub-samples are created by dividing the sample according to the median cash flow rights for the full sample. In Panel A, we further divide the High and Low Cash Flow Rights sub-samples according to whether the audit committee is 100% independent or not. In Panel B, we further divide the High and Low Cash Flow Rights sub-samples according to whether at least 50% of the audit committee is represented by either Financial or Legal Directors or not.

Groups	CAR Average	CAR Std. Deviation	Tukey's Studentized Range Test between each sub-sample and the first sub-sample
Panel A: Cash flow rights and audit committee independence			
High cash flow rights AND 100% audit committee independence	13.958	58.947	---
High cash flow rights BUT NOT 100% audit committee independence	3.043	33.685	Insignificant
Low cash flow rights AND 100% audit committee independence	1.902	40.256	Insignificant
Low cash flow rights BUT NOT 100% audit committee independence	1.442	29.733	Significant at 10% level
Groups	CAR Average	CAR Std. Deviation	Tukey's Studentized Range Test between each sub-sample and the first sub-sample
Panel B: Cash flow and audit committee profession			
High cash flow rights AND Majority Professional Directors	21.255	60.384	---
High cash flow rights BUT NOT Majority Professional Directors	1.370	34.702	Significant at 10% level
Low cash flow rights AND Majority Professional Directors	-5.46	27.023	Significant at 10% level
Low cash flow rights BUT NOT Majority Professional Directors	4.577	33.924	Significant at 10% level

Table 7. The Effects of Audit Committee Composition for High Cash Flow Rights Firms

This table presents a regression analysis of the relation between audit committee composition and earnings informativeness as measured by the earnings-return relation when cash flow rights are high compared to the median value. The dependent variable, CAR, is the cumulative 12-month market-adjusted stock return for 2000 (2000 May to 2001 April). Earnings equals net earnings reported for 2000 divided by the market value of equity at the beginning of 2000; %Audit Committee Independence is the number of independent directors over the total number of directors on the audit committee; 100% Audit Committee Independence Dummy equals one when a company's audit committee consists entirely of independent directors; %Corporate directors the number of independent directors who are currently or previously employed as executives in other publicly held corporations over total number of directors on the audit committee; %Financial directors is the number of independent directors who are current or past executives in a financial institution or Certified Public Accountants over the total number of directors on the audit committee; %Legal directors is the number of independent directors who also practice law over the total number of directors on the audit committee; Majority Professional Directors Dummy equals one when at least 50% of the audit committee is represented by either Financial or Legal Directors; Size is the natural logarithm of the market value of assets in millions of U.S. dollars at the beginning of 2000, Market-to-Book is the market value of equity divided by the book value of total assets at the beginning of 2000; and Leverage is total liabilities divided by total assets at the beginning of 2000. All regressions include dummy variables to control for country and industry effects (not reported). T-values are reported in parentheses. ***, **, * represent significance at the 1%, 5%, and 10% level, respectively.

Independent variables	Dependent variable: CAR					
Intercept	-8.58 (-1.02)	-10.01 (-1.19)	-7.118 (-0.85)	-11.42 (-1.37)	-9.655 (-1.16)	-12.103 (-1.46)
Earnings	0.077 (0.09)	0.699 (1.35)	0.543 (1.79)*	0.812 (1.58)	0.477 (0.91)	0.508 (0.99)
Earnings*% Audit Committee Independence	0.266 (0.89)					
Earnings*100% Audit Committee Independence Dummy		0.575 (1.87)*				
Earnings*% Corporate Directors			-0.58 (-1.26)			
Earnings*% Financial Directors				1.225 (2.93)***		
Earnings*% Legal Directors					21.723 (2.24)**	
Earnings*Majority Professional Dummy						1.132 (3.38)***
Earnings*Size	-0.022 (-0.42)	-0.055 (-1.42)	-0.102 (-1.92)*	-0.058 (-1.53)	-0.042 (-1.10)	-0.049 (-1.31)
Earnings*Leverage	0.374 (-0.95)	0.274 (0.69)	0.332 (0.84)	0.01 (0.03)	0.404 (1.04)	0.533 (1.39)
Earnings*Market-to-Book	0.460 (2.24)**	0.284 (1.24)	0.479 (2.36)**	0.41 (2.04)**	0.431 (2.12)**	0.328 (1.61)
R ² (%)	24.05	25.04	24.35	26.84	25.58	27.81
N	225	225	225	225	225	225

Table 8. The Effects of Audit Committee Composition for Low Cash Flow Rights Firms

This table presents a regression analysis of the relation between audit committee composition and earnings informativeness as measured by the earnings-return relation when cash flow rights are low compared to the median value. The dependent variable, CAR, is the cumulative 12-month market-adjusted stock return for 2000 (2000 May to 2001 April). Earnings equals net earnings reported for 2000 divided by the market value of equity at the beginning of 2000; %Audit Committee Independence is the number of independent directors over the total number of directors on the audit committee; 100% Audit Committee Independence Dummy equals one when a company's audit committee consists entirely of independent directors; %Corporate directors the number of independent directors who are currently or previously employed as executives in other publicly held corporations over total number of directors on the audit committee; %Financial directors is the number of independent directors who are current or past executives in a financial institution or Certified Public Accountants over the total number of directors on the audit committee; %Legal directors is the number of independent directors who also practice law over the total number of directors on the audit committee; Majority Professional Directors Dummy equals one when at least 50% of the audit committee is represented by either Financial or Legal Directors; Size is the natural logarithm of the market value of assets in millions of U.S. dollars at the beginning of 2000, Market-to-Book is the market value of

equity divided by the book value of total assets at the beginning of 2000; and Leverage is total liabilities divided by total assets at the beginning of 2000. All regressions include dummy variables to control for country and industry effects (not reported). T-values are reported in parentheses. ***, **, * represent significance at the 1%, 5%, and 10% level, respectively.

Independent variables	Dependent variable: CAR					
Intercept	-26.451 (-4.15)***	-26.854 (-4.02)***	-26.138 (-4.10)***	-26.565 (-4.15)***	-26.228 (-4.12)***	-25.965 (-4.07)***
Earnings	1.276 (0.78)	1.196 (0.75)	0.864 (0.51)	1.187 (0.73)	0.784 (0.46)	0.892 (0.54)
Earnings*% Audit Committee Independence	-0.203 (-0.44)					
Earnings*100% Audit Committee Independence Dummy		-0.104 (-0.50)				
Earnings*% Corporate Directors			0.474 (0.74)			
Earnings*% Financial Directors				-0.085 (0.27)		
Earnings*% Legal Directors					0.388 (0.70)	
Earnings*Majority Professional Dummy						0.173 (0.86)
Earnings*Size	-0.055 (-0.47)	-0.056 (-0.48)	-0.051 (-0.44)	-0.057 (-0.48)	-0.035 (-0.29)	-0.041 (-0.34)
Earnings*Leverage	0.026 (0.07)	0.008 (0.02)	0.018 (0.04)	-0.012 (-0.03)	0.039 (0.09)	-0.046 (-0.11)
Earnings*Market-to-Book	-0.013 (-0.05)	-0.013 (-0.05)	0.125 (0.45)	0.06 (0.23)	0.088 (0.33)	0.078 (0.30)
R ² (%)	27.14	27.17	24.35	24.18	24.33	24.42
N	225	225	225	225	225	225