РАЗДЕЛ 2
КОРПОРАТИВНАЯ СОБСТВЕННОСТЬ И КОНТРОЛЬ

SECTION 2
CORPORATE OWNERSHIP & CONTROL

FAMILY CONTROL, AUDIT COMMITTEES AND AUDIT FEES

Sidney Leung*, Ran Wang**

Abstract

This paper examines the impact of family control on audit effort and audit risk as proxied by audit fees, the relation between the quality of the audit committee (AC) and audit fees, and how family control influences the association between AC quality and audit fees. Using a sample of Hong Kong companies from the 2005/06 fiscal year, we find that family-controlled firms have lower audit fees. The results also show a positive association between AC quality and audit fees in Hong Kong. Moreover, the association of higher AC quality with higher audit fees is stronger in family-controlled firms than in non-family-controlled firms. Collectively, our findings suggest that audit committees in family-controlled firms require a higher degree of external audit effort than do those in non-family-controlled firms.

Keywords: Audit risk, audit fees, audit committee, family control, Hong Kong market

**Corresponding author. City University of Hong Kong, Tat Chee Avenue, Kowloon, Hong Kong. Tel.: +852 3442 7824; Fax: +852 3442 0349; E-mail address: acsleung@cityu.edu.hk.*
***Department of Accountancy, City University of Hong Kong, Email: rwang8@student.cityu.edu.hk*

1. Introduction

It is well recognized in the accounting literature that East Asian economies have a different institutional background from Western industrialized countries. The high value placed on personal networks in the former region suggests the existence of an informal contracting convention. The mainstream culture and background of East Asian economies also support the prevailing influence of family ownership. Classical economic theory posits that personal networks and family control are inconsistent with a market–oriented system and detract from the elements of transparency, competition, and fairness considered necessary to ensure that transactions are efficient. Nevertheless, if the above logic holds, this raises some interesting questions: why have economies with these institutional features undergone rapid economic development, and why do they remain so strong? In addition, why is family control such a prevalent and powerful factor when corporate governance practice suggests that it leads to a loss of efficiency?

Our first research question examines the corporate governance efficiency of family-controlled firms, which we measure by audit effort and risk. Prior research suggests that while family control can reduce conflict between owners and management, it can also induce more severe conflict between controlling shareholders and minority shareholders.

In addition, although appointing controlling family members to top management posts can ensure that owners and managers pursue common interests and maximize firm wealth, such an approach also sacrifices the benefits of employing professional managers.

The efficiency of family control can be examined in a number of ways: one stream of the literature (see, for example, Anderson and Reeb, 2003) examines the market performance of family firms; another stream tests earnings informativeness and earnings quality (see, for example, Wang, 2006, Bikki et al., 2009). External audits are another channel for evaluating the impact of governance in family firms. In comparison with public statements and market price reaction, auditors' opinions are a better way of assessing the influence of family firm governance arrangements as auditors have greater access to unpublished information and internal records that allow them to assess firms' internal control systems as a whole. Moreover, Hogan and Wilkins (2008) demonstrate that even when internal control deficiencies are identified, auditors can still provide an unqualified opinion by increasing their substantive testing. In other words, auditors adjust their audit effort and audit fees according to the degree of risk identified. This suggests that audit fees may be representative of the degree of audit effort and risk and hence relate to the efficiency of the firm's corporate governance and ownership structure.

The second research question we examine in this paper relates to the quality of audit committees in the Hong Kong market. The HKICPA has issued "*A Guide for Efficient Audit Committees*" which makes a number of best practice recommendations for such committees. A concern exists in Hong Kong and the East Asian region that even if a firm's accounting meets all regulatory requirements, institutional factors such as *guanxi* (personal networks and relationships), family ownership, and bank power may distort the incentive to prepare true and fair financial statements and may thus detract from accounting quality. Given the unique institutional setting of Hong Kong, we test for the existence of a positive relation between AC quality and audit fees. We use four measures as proxies of the quality of the audit committee: *diligence, size, independence*, and *expertise*.

Our third research question focuses on how family control influences the association between AC quality and audit fees. Specifically, given that the literature argues that family firms have more governance deficiencies than other firms, we examine whether high-quality ACs in family-controlled firms require more audit effort, as reflected in higher audit fees.

Using a combination of 2005/06 fiscal year data for a sample of 438 Hong Kong companies taken from the Compustat (Globalvantage) database and manually collected family control and corporate governance variables from the 2005/06 annual reports of the same companies, we reach several conclusions. After controlling for firm characteristics that have been documented in the audit fee literature, our OLS results show that family-controlled firms have lower audit fees, which proxy for audit effort and risk. Our results also support the existence of a positive association between audit committee quality and audit fees in Hong Kong. This relation is stronger in family-controlled firms than in non-family-controlled firms, suggesting that high-quality audit committees demand more external audit effort in family firms.

This paper makes three major contributions. First, it forges a link between the family control literature and the audit fee literature. The use of audit fees as a proxy for audit risk sheds light on the measurement of corporate governance efficiency in family-controlled firms. Our testing of corporate governance efficiency in family firms versus non-family firms is important because family control potentially has opposite effects in agency problems (Type I and Type II). Moreover, due to the prevalence of family ownership and the market power exerted through family control, family firms are an especially important research topic in the East Asian context. Our findings also enhance our understanding of whether family ownership and *guanxi* networks are efficient and benefit shareholders and investors.

The second contribution this paper makes is to facilitate a better understanding of audit committee efficiency in the context of East Asian economies, which benefit from high-quality regulation but have a less market-oriented institutional background. Specifically, we highlight the characteristics of audit committees operating in the Hong Kong economy, and especially those of family-controlled firms. Moreover, we extend prior research by examining the roles played by both audit committees and family control in the audit pricing process.

The third contribution this paper makes is to shed light on the regulatory aspects of audit practice in family-controlled firms. It provides some evidence on whether the best practice recommendations made for audit committees work well in the Hong Kong market in general and in family-controlled firms in particular. Hong Kong regulators may draw on the implications of this study for audit committee quality and the influence of family control.

The rest of the paper is arranged as follows. Section 2 presents the literature review and develops our hypotheses. Section 3 outlines the sample selection procedure and the research design adopted. We discuss our empirical results in section 4 before presenting our conclusions in section 5.

2. Theory and Hypotheses

2.1. Audit Fees and Audit Risk

According to the audit risk model, audit risk is specified as a function of three risk components: inherent risk, control risk, and detection risk.

Audit Risk = Inherent Risk*Control Risk*Detection Risk

Inherent risk refers to the probability that environmental factors will produce a material error before considering the quality of internal control. Control risk means the probability that the internal control system will not prevent or detect a material error. Detection risk represents the probability that audit procedures will not detect a material error which has not previously been detected by the internal control system. Auditors document both inherent risk and control risk on the basis of client assessments. When inherent risk and/or control risk are/is high, auditors must reduce detection risk to maintain overall audit risk at an acceptable level. This normally means increasing the level of substantive testing. For example, when managers manipulate accruals to conceal poor performance or postpone earnings to future years, auditors revise upwards their assessments of inherent risk, which will result in higher audit fees.

Evidence is mixed on whether auditors' tests will be increased when risk factors are present before the SOX 404 phase (Section 404 of the Sarbanes-Oxley Act) (Mock and Wright, 1999; O'Keefe et al., 1994). However, research on the post-SOX 404 disclosure of weaknesses and deficiencies shows that auditors' risk adjusting behavior is quite significant. For example, Hogan et al. (2008) show that audit firms appear to increase their fees when control deficiencies exist, particularly in cases where the problems are the most severe. Hoitash et al. (2007) use client size and estimates of expected audit fees to proxy for unobservable audit risk and effort and find a statistically significant positive association between total fees and audit effort.

2.2. Family-controlled Firms and Audit Fees

While agency problems in family firms go beyond issues between management and shareholders (the Type I agency problem), family firms have certain advantages in addressing conflict between managers and owners. The appointment of family members to the CEO post or to other top management posts in a family-controlled firm can reduce the incentive of managers to engage in short-term behavior. Furthermore, as concentrated shareholders, controlling families conduct better monitoring, reduce information asymmetry, and reduce the free rider problem. Founding families that seek to maintain a long-term presence in their firms also closely guard their reputation. Family firms are generally better at monitoring management and reducing managerial opportunities to engage in earnings management. According to stewardship theory, earnings are less likely to be manipulated when controlling families have interests that are consistent with increasing the firm's wealth. (Tosi and Gomez-Mejia, 1989).

Despite the Type I advantages of family firms, the Type II agency problem – conflict between controlling shareholders and minority shareholders – is more severe in this type of firm. Controlling shareholders have an opportunity to maximize their private benefits by expropriating value from minority shareholders (Fan and Wong, 2002). Founding families have their own concerns and interests, such as stability and capital preservation, which may differ from the interests of outside shareholders; family control firms have the ability to exploit opportunities to gain private rent. They may benefit more from firm growth, technological innovation, or firm survival than from enhancing shareholder value (Fama and Jensen, 1985). Family controllers are also capable of expropriating wealth from the firm through excessive compensation, related party transactions, or special dividends. The potential for family firms to engage in these forms of behavior means that family members may be unable to reconcile their financial preferences with the interests of outside owners. For example, Maury (2006) uses a sample of European corporations to provide evidence that in a low shareholder protection and high control economy environment, family control will mitigate the agency problem between owners and managers, but is likely to cause conflict between family and minority shareholders. DeAngelo et al. (2000) show that the owners of family-controlled firms extract private benefits to the cost of minority shareholders. Fan and Wong (2002) find that conflicts between large shareholders and minority shareholders are more serious in East Asian countries where controlling family ownership is widespread, legal protection of minority shareholders is weaker, and financial reporting is less transparent.

Prior research also indicates that family firms are inclined to exert their influence through direct management control. Anderson and Reeb (2003) and Demsetz and Lehn (1985) show that family firms are more likely to appoint family members to top management positions or to serve as CEO with a view to aligning the performance goals of owners and managers. In other words, dominant families seek to impede third party control of their firms by selecting managers and directors from within the family (Barclay and Holderness 1989) and, especially when a family member fills the CEO position, to exclude more capable and talented outside professional managers. Family firms therefore stand to lose by foregoing opportunities to hire talented managers who are not family members. Large shareholders in family firms may remain active in management even if they lack the qualifications to do so and are likely to detract from the firm's competitiveness.

Overall, although family control can help in the setting of consistent business targets that combine the efforts of both management and ownership, it also can put the economic interests of minority shareholders at risk. Moreover, personnel arrangements in family firms are based on kinship relationships rather than on fair competition, a feature which may influence the integrity and professionalism of employees. In

addition to firm value and the informativeness of financial statements, external auditors' opinions are another useful channel for measuring the efficiency of family control. In comparison with public statements and market price reaction, auditors' opinions may be more reflective of the impact of firm governance arrangements given that auditors have access to firms' unpublished information which allows them to assess the effectiveness of the firm's internal control system as a whole. For example, auditors have access to the systems their clients employ to process transactions, can evaluate the quality of personnel involved in the accounting function, and can examine client policies and procedures related to the preparation of financial statements. By using their professional knowledge, external auditors can make reliable judgments about firms' accounting practices, the informativeness of their financial statements, and the efficiency of their corporate governance arrangements. Hogan et al. (2008) demonstrate that even when internal control deficiencies are identified, auditors can still provide an unqualified opinion by increasing their substantive testing. In other words, auditors adjust their audit effort and audit fees according to the degree of risk they detect. Audit fees may therefore represent audit effort and audit risk and relate to the efficiency of the firm's corporate governance practices and ownership structure. Although Gul et al. (2003) find a negative relation between family ownership and audit fees, it is worthwhile considering whether family control has the opposite effect. If the reduction in Type I agency costs dominates the Type II agency problem associated with family control, we expect family control to have a positive net influence on governance efficiency (such as through better internal control and risk management), resulting in lower audit fees due to lower audit risk and reduced audit effort. We therefore propose the following hypothesis:

H1a: Family control is associated with lower audit effort/audit fees.

Alternatively, if increases in Type II agency costs dominate the reduction of Type I agency costs in family-controlled firms, we expect family control to have a negative impact on governance efficiency (such as through the expropriation of assets by controlling families, weak internal control, and poor risk management), resulting in higher audit risk and audit effort and thus higher audit fees. The alternative hypothesis is therefore stated as follows:

H1b: Family control is associated with higher audit effort/audit fees.

2.3 *Audit Committee Quality and Audit Fees*

In December 1995, the Hong Kong Society of Accountants, or the HKSA (now renamed the Hong Kong Institute of CPAs, or the HKICPA) issued the first report of its Corporate Governance Committee (formerly the Corporate Governance Working Group). "A Guide for the Formation of An Audit Committee", which was first issued in 1997 and later in revised form as "A Guide for Effective Audit Committees" in 2002, is aimed at promoting corporate governance practice in Hong Kong by providing practical guidance on audit committees. It suggests that the function of an audit committee includes reviewing the effectiveness of the firm's financial reporting process, internal controls, and risk management system, and overseeing audit duties. Moreover, the guide recommends that audit committees meet three or four times a year, that the typical committee size should be three to five members, and proposes benchmarks for assessing the independence and quality of audit committees. Due to the efforts the HKICPA has made to promote corporate governance and the widespread acceptance of audit committees among Hong Kong firms, audit committees have become a fundamental part of the corporate governance landscape in Hong Kong.

Hong Kong, in common with other emerging economies in East Asia, benefits from high-quality corporate governance regulation, but this may not necessarily result in effective audit committees. For example, Ball et al. (2003) raise the concern that institutional factors such as family control, *guanxi*, and bank power may distort the incentives of financial statement preparers and hence detract from accounting quality. Inferring from above discussions , the existence of a mature legal and penalty system is a prerequisite to an active audit committee as it ensures that audit committee members, and especially independent directors, will be concerned to maintain their reputation and avoid regulatory penalty. The institutional environment and the ownership structure should also support the enforcement of audit committee reviews and decisions. The unique features of the legal, regulatory and institutional environment in East Asian economies suggest that it is worthwhile investigating whether findings of a positive association between audit committee quality and audit fees are valid in the East Asian setting.

Prior research consistently shows a positive association between an effective audit committee and audit fees (e.g., Abbott et al., 2001; Vafeas and Waegelein, 2007). This stream of the literature suggests four underlying explanations for this positive relation: first, due to concerns about financial, reputational, and litigation losses caused by financial misstatements, independent and active audit committees demand a higher level of audit quality which may be higher than that the Big 4 audit firms normally provide. This demand for better quality accounting leads to greater audit coverage and hence higher audit fees. Second, independent and active audit committees have greater bargaining power within the firm that enables them to pay higher audit fees. By protecting auditors from fee cuts, audit committees prevent any potential decrease in audit

quality. Third, audit committees enhance the independence of external auditors by constraining the non-audit services they provide. Fourth, an active audit committee can persuade management to select a more knowledgeable auditor with a better reputation.

As suggested by prior studies, certain audit committee characteristics can have an impact on the execution of audit committee duties (Carcello and Neal, 2000; Raghunadan et al., 2001). Four major characteristics of audit committees have an impact on their performance: diligence, size, independence, and expertise. In terms of diligence, Menon and Williams (1994) highlight meeting frequency as a signal of audit committee dedication. Audit committees that meet frequently are more likely to be informed of current auditing issues and to be more diligent in the discharge of their duties. Audit committees that meet more frequently can proactively and positively influence audit coverage during the various stages of the audit. In terms of audit committee size, while some studies (e.g., Vafeas and Waegelein, 2007; Boo and Sharma, 2008) address the association of size and audit fees, the results are mixed. Researchers who have examined the aspect of independence have found that when audit committee members are not personally and/or economically dependent on management, they are willing to disagree with management on a variety of issues. Carcello and Neal (2000) find that financially distressed firms with audit committees are more likely to receive going-concern opinions. During the review of the audit program and its results, an independent audit committee may demand that the scope of the audit be expanded to avoid being associated with financial misstatements and preserve its reputational capital. This suggests that independent audit committee directors demand greater levels of audit assurance and potentially provide stronger support for auditors during scope negotiations with management. In terms of expertise, knowledgeable audit committees are better equipped to understand auditor judgments and discern the substance of disagreements between management and external auditors. This leads us to expect a positive association between audit fees and audit committee expertise.

A larger, more independent, more diligent, and more expert audit committee may demand significantly higher audit quality than that normally provided by the Big 4 audit firms. This positive relation would also suggest that audit committee members seek additional audit assurance from external auditors because they are concerned about potential audit risk. Because Hong Kong is well known as a financial center and has one of the leading compliance systems in the world, we expect to see a positive association between audit committee quality and audit fees in the Hong Kong context:

H2a: Audit committees that meet more frequently are associated with higher audit fees;
H2b: Larger audit committees are associated with higher audit fees;
H2c: More independent audit committees are associated with higher audit fees;
H2d: More expert audit committees are associated with higher audit fees.

2.4 Impact of Family Control on the Association between AC Quality and Audit Fees

As discussed in hypothesis one, family control in firms may not only reduce manager-owner conflict (the Type I agency problem), but may also introduce conflict between large and minority shareholders (the Type II agency problem). Which effect of family control dominates in the Hong Kong market is an empirical issue. Based on hypothesis two, a larger and more diligent, independent, and expert audit committee will demand broader audit coverage, which will in turn result in higher audit fees. Nevertheless, regardless of the size, diligence, independence or expertise of an audit committee, it needs a well-developed market and regulatory environment to be effective. Given that the Hong Kong economy features concentrated family ownership structures, *guanxi* networks, and strong banks, the positive relation between audit committee quality and audit fees is open to question in the Hong Kong environment. We address the research question of whether the positive relation between the effectiveness of the audit committee and audit fees is weakened or strengthened by family control by analyzing the two following scenarios.

The first scenario is that audit committees in family firms may require more assurance from external auditors than audit committees in non-family firms. This is because family firms suffer from more severe agency problems between controlling families and minority shareholders. To protect the economic interests of powerless minority shareholders, audit committees in family firms may demand more external audit coverage and work. Furthermore, audit committees consist of non-executive directors, the majority of whom are independent non-executive directors who are likely to be more concerned about their reputation than other directors. As market participants normally expect agency problems to arise in family-controlled firms, an efficient audit committee will support a more detailed and expanded external audit requirement to reduce the possibility that financial misstatements, which will damage the reputation of audit committee members, are issued.

The second scenario we examine is that although audit committees in family firms may seek a higher level of audit coverage that those in non-family firms, the controlling family may seek to weaken their influence. Audit committees normally represent the board and oversee the accounting process and the quality of financial reports produced by management. However, when the board and management are from the same controlling family, the appointment and re-

appointment of independent directors is ultimately determined by the controlling family. This may weaken the bargaining power of the audit committee and limit its efficiency in monitoring management. Because audit committee members are subject to the power and influence of controlling parties including owners, boards, and managers, whether an audit committee is likely to be effective in monitoring and controlling management cannot be forecast with any degree of certainty. The political power wielded by controlling families may weaken the positive association between audit committee quality and audit fees.

In summary, while audit committees in family-controlled firms are more likely to maintain or enhance their reliance on external auditor coverage than are their counterparts in non-family-controlled firms, the political power wielded by controlling families is also likely to influence their functioning. Given the two possible effects of family control, the final hypothesis is stated in alternative form:

H3a: The positive association between AC quality and audit fees is stronger in family-controlled firms than in non-family-controlled firms; and

H3b: There is no difference in the positive association between AC quality and audit fees between family-controlled firms and non-family-controlled firms.

3 Research Design

3.1 Sample and data collection

lThe sample year is 2005/06 (from December 2005 to November 2006). We select the 2005/06 year because the new Code on Corporate Governance Practices became effective for Hong Kong firms with accounting periods commencing on or after 1 January 2005. After excluding companies engaging in the financial industry, we identify 638 Hong Kong companies from the Compustat (Globalvantage) database. Of these 638 observations, 25 companies are not listed in Hong Kong, 8 have been delisted, are inactive, or have been liquidated, 1 has changed its financial year-end, and 1 has been taken over. These observations are therefore dropped from the sample. We then manually collect ownership data and other corporate governance variables from the 2005 annual reports of the sample companies. This stage results in the exclusion of 61 companies in which more than 50% of board members were replaced during the financial year but the members of the board of directors were not clearly defined in the "corporate information" section of the annual report. After deleting extreme values and dropping missing values for the required variables, we are left with a total of 438 observations.

3.2 Research Methodology

Dependent variables

Following prior discussion (e.g., Hogan et al., 2008), audit fees can be a proxy of audit coverage and audit effort, as well as of audit risk. When a firm is perceived to have an efficient corporate governance system and an efficient accounting process, the auditor (audit service supplier) will reduce audit effort and thus the audit fees the firms is charged, and vice versa. An active audit committee (the audit service demand side) seeks to increase external audit coverage and effort to minimize the risk that financial statement fraud is not detected. The dependent variable is calculated in two ways: as the natural logarithm of audit fees and as the natural logarithm of the sum of audit fees and non-audit fees (i.e., total fees).

Experimental variables

Family control is proxied by a dummy variable, *FAM*, which takes the value of 1 when either the CEO or the Chairman of the board is a member of the controlling family and 0 otherwise. A firm is identified as having a controlling family if the same family owns more than 10% of the firm's shares. Ownership data and data on whether directors and senior managers are from the same family are manually collected from the 'directors' report' section of the annual reports. Because the Chairman is the head of the board, we consider that the family controls the board if a family member occupies this position. A family member occupying the CEO position is also taken to represent family control as the CEO is responsible for managing the firm's operations. Some studies (e.g., Anderson and Reeb, 2003) suggest using the fractional equity ownership of the family and (or) the presence of family members on the board to identify family firms, although we do not follow this approach here.

Following prior research (e.g., Carcello and Neal, 2000; Raghunadan et al., 2001), the efficiency of the audit committee is measured by four characteristics: diligence, size, independence, and expertise. We use the natural logarithm of the number of meetings held per year to represent the diligence of the audit committee. The more frequently an audit committee meets, the more diligent it is considered to be. The size of the audit committee is measured by the natural logarithm of the number of committee members. Independence is proxied by the proportion of independent non-executive directors on the board. The expertise of the audit committee is measured by whether AC members have an accounting background.

3.3 The Regression Model

The following regression model is used to examine Hypothesis 1 and Hypothesis 2.

$$LNTAF = b_0 + b_1 LNMEET + b_2 LNSIZE + b_3 ACIND + b_4 ACEXP + b_5 FAM + b_6 PNED + b_7 LNSUB + b_8 LNAT + b_9 LNFOR + b_{10} LNSEGB + b_{11} LNSEGG + b_{12} DE + b_{13} ROA + b_{14} BIG5 + b_{15} INVERC + b_{16} AOP + b_{17} QUICK + b_{18} YE + b_{19} LNSALE + e \quad (1)$$

$$LNAF = b_0 + b_1 LNMEET + b_2 LNSIZE + b_3 ACIND + b_4 ACEXP + b_5 FAM + b_6 PNED + b_7 LNSUB + b_8 LNAT + b_9 LNFOR + b_{10} LNSEGB + b_{11} LNSEGG + b_{12} DE + b_{13} ROA + b_{14} BIG5 + b_{15} INVERC + b_{16} AOP + b_{17} QUICK + b_{18} YE + b_{19} LNSALE + e \quad (2)$$

where the dependent variables are:
LNTAF = the natural log of total audit fee;
LNAF = the natural log of audit fee;

the control variables are:
PNED = the proportion of non-executive directors on the board;
LNSUB = the natural log of the number of subsidiaries;
LNAT = the natural log of total assets;
LNFOR = the natural log of the number of foreign subsidiaries;
LNSEGB = the natural log of the number of business segments;
LNSEGG = the natural log of the number of geographical segments;
DE = long-term debt divided by total assets;
ROA = income before extraordinary items divided by the previous year's total assets;
BIG4 = 1 if the auditor is Big 4 audit firm and 0 otherwise;
INVERC = inventory plus accounts receivable divided by total assets;
Quick = current assets minus inventory divided by current liabilities;
AOP = 0 if an unqualified rep
ort is issued and 1 otherwise;
YE = 1 if the final day of the financial year is Dec.31;
LNSALE = the natural log of total sales;

and the experimental variables are:
LNMEET = the natural log of the number of meetings held by the audit committee per annum;
LNSIZE = the natural log of the number of members on the audit committee;
ACIND = the proportion of independent directors on the audit committee;
ACEXP = 1 if at least one independent director on the audit committee has an accounting background and 0 otherwise;
FAM = 1 if the CEO or Chairman of the board is a family member and 0 otherwise.

The independent variables other than the experimental variables are identified from the existing audit fee literature (e.g., Hogan and Wilkins, 2008; Gul et al., 2003).

To assess the impact of family control on the positive association between audit committee quality and audit fees, we divide the sample into two groups using the dummy variable FAM where a value of 1 represents family firms and 0 represents non-family firms. Equations 3 and 4 are both solved for the two sub-samples.

$$LNTAF = b_0 + b_1 LNMEET + b_2 LNSIZE + b_3 ACIND + b_4 ACEXP + b_5 PNED + b_6 LNSUB + b_7 LNAT + b_8 LNFOR + b_9 LNSEGB + b_{10} LNSEGG + b_{11} DE + b_{12} ROA + b_{13} BIG5 + b_{14} INVERC + b_{15} AOP + b_{16} QUICK + b_{17} YE + b_{18} LNSALE + e \quad (3)$$

$$LNAF = b_0 + b_1 LNMEET + b_2 LNSIZE + b_3 ACIND + b_4 ACEXP + b_5 PNED + b_6 LNSUB + b_7 LNAT + b_8 LNFOR + b_9 LNSEGB + b_{10} LNSEGG + b_{11} DE + b_{12} ROA + b_{13} BIG5 + b_{14} INVERC + b_{15} AOP + b_{16} QUICK + b_{17} YE + b_{18} LNSALE + e \quad (4)$$

The definitions of the variables in Equations 3 and 4 are the same as those for the variables in Equations 1 and 2.

4 Empirical results

4.1 Descriptive statistics and correlations among the variables

The summary statistics for all of the variables are presented in Panel A of Table 1. The independence of the audit committee, measured by the proportion of independent non-executive directors on the audit committee, is particularly high with a mean of 93%. This shows the highly independent status of audit committees in Hong Kong and suggests they are unlikely to be influenced by management. The family control dummy has a mean of 0.49, which shows the considerable market share enjoyed by family firms in Hong Kong.

The correlation coefficients among all the variables are shown in Panel B of Table 1. The correlation statistics between the experimental variables and the dependent variables are not as significant as expected. This is likely to be because we do not control for a number of major factors such as total assets, segments, etc. Consistent with prior literature, firms with more domestic and foreign subsidiaries, greater assets, more business and geographical segments, and higher sales require more audit effort and hence pay more in audit fees. Big 4 auditors also charge significantly more than other auditors.

Table 1 insert here

4.2 Univariate Analysis of Audit Fees

Table 2 reports the univariate t-test results for differences in audit fees between family firms and non-family firms, audit committee meeting frequency, and audit committee size, independence, and expertise. Although the mean level of audit fees paid by family firms is lower than that paid by non-family firms, the t-test p value is not significant. However, this result is not meaningful until we control for firm size, auditor type, etc. Although they should also be treated with caution until we control for the same variables, the results for audit committee size, audit committee meeting frequency, and audit committee independence and expertise are not consistent with prior literature. These results may indicate that the Hong Kong market is different from Western industrialized markets, although they should be more convincing after comparing them with the results of our multivariate tests.

Table 2 insert here

4.3 Multivariate analysis comparing audit fees with family control and audit committee characteristics

Table 3 shows the results of ordinary least-square regressions used to test Hypothesis 1 and Hypothesis 2 after controlling for the factors that have commonly been identified in the audit fee literature. The regression results on family control and audit fees are significantly negative. Family firms suffer less from the agency problem between management and ownership, but are more likely to see conflict between controlling shareholders and minority shareholders. An empirical test based on Hong Kong data will help us diagnose which effect dominates in the Hong Kong market. However, it is too early to claim that family control can reduce audit risk in Hong Kong because there are two possible explanations for the result of lower audit fees for family-controlled firms. The lower level of audit fees in family-controlled firms could be the result of decisions made by external auditors who perceive more efficient corporate governance and accounting processes in family firms. Alternatively, the low audit fees result could be driven by deliberate efforts made by management to restrict the coverage and scope of external audits. It is too early to say what drives our results; the analysis for H3 will provide additional insight into the impact of family control on audit fees.

In Equation 1 and Equation 2, we also test the relation of audit committee quality and audit fees in the Hong Kong institutional environment (Hypothesis 2). The results reported in Table 3 show that although the signs of the four characteristics (diligence, size, independence, and expertise) are consistent with prior literature and our expectations, we find that only the number of AC meetings and the size of the audit committee are significantly associated with higher audit fees. The findings suggest that a larger AC (greater AC resources) and more meetings (greater AC effort) lead to higher demand for additional auditor work and effort. However, we find no evidence of higher audit fees in firms with more independent AC members or more AC members with an accounting background.

Table 3 insert here

Family ownership and control is a feature of Hong Kong's corporate landscape. Controlling families influence the operations of the enterprises they own through their political power. Our testing of family-controlled firm and non-family-controlled firm sub-samples may shed some light on the question of whether family-controlled firms are more efficient in terms of corporate governance, monitoring, and accounting process. If internal monitoring is weak in family firms, we expect that a high-quality audit committee would demand more external auditing effort to discharge its responsibility and that this would lead to higher audit fees. On the other hand, if family-controlled firms have better governance and internal monitoring, they are likely to be less reliant on external audits and will pay lower audit fees as a result. The sub-sample analysis reported in Table 4 shows that the key elements of audit committee quality are associated with higher audit fees in family-controlled firms. These findings are consistent with the notion that audit committees in family-controlled firms seek more external audit assurance.

Table 4 insert here

5. Conclusion

We investigate three research questions in this paper. First, we examine whether family-controlled firms are associated with higher or lower audit fees. Second, we evaluate whether the quality of audit committees in the Hong Kong market is associated with higher audit fees. Finally, we evaluate the impact of family control on the association between audit committee quality and audit fees.

After analyzing 2005/06 fiscal year data for Hong Kong companies drawn from the Compustat (Globalvantage) database, along with data on corporate governance variables manually collected from the annual reports of the same companies, we reach several conclusions. According to the OLS regression results, family-controlled firms pay lower audit fees, which proxies audit effort and risk. We also find that the positive association between audit committee quality and audit fees confirmed in earlier research also exists in Hong Kong. Interestingly, this relation is stronger in family-controlled firms than in non-family-controlled firms. Taken together, our results suggest that high-quality audit committees in family-controlled firms are concerned with ensuring the controlling family does not exert undue influence

on the board and are thus are more likely to rely on external auditors' efforts to ensure the accuracy and reliability of the firm's financial statements.

This paper enriches the family firm literature by showing that audit risk proxied by audit fees can shed light on the corporate governance efficiency of family-controlled firms. Further research in this area is likely to lead to a better understanding of how East Asian economies, and Hong Kong in particular, are affected by the prevalence of family ownership and the widespread use of *guanxi* networks. A further contribution this paper makes is to examine how various audit committee characteristics affect the Hong Kong economic environment, particularly among family-controlled firms. Our work may also assist regulators by presenting evidence of how corporate governance regulations work in the Hong Kong market.

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Appendices

Table 1. Descriptive statistics and correlation coefficients of the variables

Panel A: Descriptive statistics of the variables

Variable	N	Mean	Std Dev	Minimum	Maximum
LNAF	438	13.903	0.935	10.915	17.116
LNTAF	438	14.128	0.975	11.462	17.116
LNMEET	438	1.311	0.276	0	2.197
LNSIZE	438	1.438	0.112	1.0993	1.946
ACIND	438	0.931	0.126	0.5	1
ACEXP	438	0.797	0.403	0	1
FAM	438	0.486	0.5	0	1
PNED	438	0.499	0.132	0.083	0.786
LNSUB	438	2.764	0.712	0	4.99
LNAT	438	20.471	1.632	15.111	25.457
LNFOR	438	1.484	0.968	0	4.511
LNSEGB	438	1.271	0.392	0	2.303
LNSEGG	438	1.03	0.591	0	2.485
INVERC	438	0.314	0.221	0	1.516
DE	438	0.747	3.817	-0.00003	54.39
ROA	438	0.02	0.161	-1.466	0.532
AOP	438	325114	0.223	0	1
QUICK	438	2.526	3.592	0.11	30.058
YE	438	0.466	0.499	0	1
LNSALE	438	20.125	1.813	11.802	24.742
BIG4	438	0.731	0.444	0	1

LNTAF = the natural log of total audit fees;
LNAF = the natural log of audit fees;
PNED = the proportion of non-executive directors on the board;
LNSUB = the natural log of number of subsidiaries;
LNAT = the natural log of total assets;
LNFOR = the natural log of number of foreign subsidiaries;
LNSEGB = the natural log of number of business segments;
LNSEGG = the natural log of number of geographical segments;
DE = long-term debt divided by total assets;
ROA = income before extraordinary items divided by previous year's total assets;
BIG4 = 1 if the auditor is a Big 4 audit firm and 0 otherwise;
INVERC = inventory plus accounts receivable divided by total assets;
Quick = current assets minus inventory divided by current liabilities;
AOP = 0 if an unqualified report is issued and 1 otherwise;
YE = 1 if the final day of the financial year is Dec. 31;
LNSALE = the natural log of total sales;
LNMEET = the natural log of the number of meetings held by the audit committee per annum;
LNSIZE = the natural log of the number of members on the audit committee;
ACIND = the proportion of independent directors on the audit committee;
ACEXP = 1 if at least one independent director on the audit committee has an accounting background and 0 otherwise;
FAM = 1 if the CEO or Chairman of the board is a family member and 0 otherwise;
** Correlation is significant at the 0.01 level (two-tailed); * Correlation is significant at the 0.05 level (two-tailed)

Panel B: Pearson correlation coefficients

	LNTAF	LNAF	LNMEET	LNSIZE	ACIND	ACEXP	FAM	PNED	LNSUB	LNAT	LNFOR	LNSEGB	LNSEGG	DE	ROA	BIG4	INVERC	AOP	QUICK	YE	NSALE
LNMEET	-0.013	-0.019																			
LNSIZE	0.212**	0.225**	0.015																		
ACIND	-0.205**	-0.221**	-0.028	-0.671**																	
ACEXP	-0.053	-0.082	-0.0396	-0.020	0.027																
FAM	-0.029	-0.0328	-0.064	0.088	-0.106*	-0.02															
PNED	-0.022	-0.01	-0.213**	-0.25**	0.306**	0.02	0.084														
LNSUB	0.485**	0.46**	-0.066	0.128**	-0.163**	-0.083	0.097*	0.096*													
LNAT	0.724**	0.701**	-0.125**	0.221**	-0.272**	-0.115*	0.012	0.039	0.479**												
LNFOR	0.308**	0.275**	0.057	0.138**	-0.126**	-0.041	0.134**	-0.014	0.621**	0.244**											
LNSEGB	0.194**	0.176**	-0.129**	0.067	-0.004	0.084	-0.026	0.056	0.319**	0.230**	0.152**										
LNSEGG	0.256**	0.247**	-0.032	0.086	-0.024	0.015	0.097*	-0.021	0.233**	0.143**	0.255**	0.107*									
DE	-0.115*	-0.118*	-0.035	-0.07	0.075	0.048	-0.012	0.019	-0.018	-0.165**	0.009	-0.023	-0.045								
ROA	0.237**	0.238**	-0.125**	0.124**	-0.112*	-0.033	0.041	0.036	0.082	0.355**	0.095*	-0.113*	0.166**	-0.154**							
BIG4	0.465**	0.461**	-0.122*	0.136**	-0.18**	-0.038	0.025	0.006	0.169**	0.444**	0.061	0.027	0.137**	-0.075	0.236**						
INVERC	-0.055	-0.026	0.124**	-0.084	0.111*	-0.006	0.041	0.029	-0.024	-0.234**	0.055	-0.179**	0.117*	-0.061	0.068	-0.056					
AOP	-0.140**	-0.139**	-0.021	-0.089	0.109*	-0.008	-0.045	-0.006	-0.067	-0.17**	-0.053	-0.013	-0.088	0.032	-0.313**	-0.157**	0.11*				
QUICK	-0.079	-0.089	-0.001	0.067	-0.048	0.046	-0.031	-0.006	-0.182**	-0.035	-0.094	-0.014	-0.183**	-0.03	-0.004	0.011	-0.32**				
YE	-0.108*	-0.123**	-0.09	0.039	0.051	0.051	0.145*	0.04483	-0.027	-0.154**	-0.029	-0.065	-0.057	0.084	0.008	-0.093	0.1*	-0.04	0.1*		
LNSALE	0.659**	0.654**	-0.059	0.165**	-0.202**	-0.111*	0.005	0.02255	0.459**	0.762**	0.293**	0.066	0.254**	-0.169**	0.451**	0.427**	0.19**	-0.18**	-0.28**	-0.1*	

Table 2. Univariate t-test results on audit fees

	LNTAF			LNAF		
	N	Mean	p-value	N	Mean	p-value
FAM						
Non-family firm	225	14.026	0.55	225	13.933	0.49
family firm	213	13.968		213	13.871	
ACMEET						
low frequency	307	14.21	0.006	307	13.992	0.002
high frequency	131	13.934		131	13.693	
ACSIZE						
small size	344	14.039	0.0002	344	13.715	<0.0001
large size	94	14.663		94	14.042	
ACIND						
Low independence	105	14.311	<0.0001	105	14.289	<0.0001
High independence	333	13.909		333	13.781	
ACEXP						
Without AC background	89	14.23	0.2699	89	14.275	0.0865
With AC background	349	14.102		349	13.959	

LNTAF = the natural log of total audit fees;
LNAF = the natural log of audit fees;
Non-family firm = Neither the CEO nor the Chairman of the board is a member of the controlling family;
Family firm = CEO or Chairman of the board is a member of the controlling family;
Low frequency = Audit committee meets less than or equal to 3 times per annum;
High frequency = Audit committee meets more than 3 times per annum;
Small size = Audit committee has 3 members or fewer;
Large size = Audit committee has 3 or more members;
Low independence = The proportion of independent directors on the audit committee is less than or equal to 95%;
High independence = The proportion of independent directors on the audit committee is higher than 95%;
Without AC background = None of the independent directors on the audit committee has an accounting background;
With AC background = There is at least one independent director on the audit committee who has an accounting background.

Table 3. Regressions Results for Equation 1 and Equation 2

	Dependent variable=Total Audit Fees		Dependent variable=Audit Fees	
	Coeff.	t-stat	Coeff.	t-stat
Intercept	3.8	4.1***	4.3811	4.72***
LNMEET	0.2416	2.11**	0.1925	1.68*
LNSIZE	0.5909	1.64	0.6994	1.93*
ACIND	0.472	1.41	0.255	0.76
ACEXP	0.0853	1.15	0.0074	0.01
FAM	-0.1106	-1.81*	-0.1141	-1.86*
PNED	-0.2911	-1.19	-0.1006	-0.41
LNSUB	0.1789	2.85***	0.164	2.61***
LNAT	0.2941	7.82***	0.259	6.88***
LNFOR	0.0337	0.84	0.0021	0.05
LNSEGB	0.0295	0.35	0.0232	0.27
LNSEGG	0.1593	2.95***	0.1457	2.69***
DE	0.0013	0.16	0.0013	0.16
ROA	-0.4244	-1.91*	-0.4103	-1.85*
BIG4	0.3796	4.97***	0.3625	4.74***
INVREC	0.177	1	0.2726	1.54
AOP	-0.0258	-0.18	-0.047	-0.33
QUICK	0.0083	0.89	0.0073	0.77
YE	0.0272	0.44	-0.0166	-0.27
LNSALE	0.0858	2.47**	0.0912	2.62***
N		438		438
Adj.R-SQ		0.6047		0.567
P-value of F-stat		<0.001		<0.001

LNTAF = the natural log of total audit fees;
LNAF = the natural log of audit fees;
PNED = the proportion of non-executive directors on the board;
LNSUB = the natural log of number of subsidiaries;
LNAT = the natural log of total assets;
LNFOR = the natural log of number of foreign subsidiaries;
LNSEGB = the natural log of number of business segments;
LNSEGG = the natural log of number of geographical segments;
DE = long-term debt divided by total assets;
ROA = income before extraordinary items divided by previous year's total assets;
BIG4 = 1 if the auditor is a Big 4 audit firm and 0 otherwise;
INVERC = inventory plus accounts receivable divided by total assets;
Quick = current assets minus inventory divided by current liabilities;
AOP = 0 if an unqualified report is issued and 1 otherwise;
YE = 1 if the final day of the financial year is Dec. 31;
LNSALE = the natural log of total sales;
LNMEET = the natural log of the number of meetings held by the audit committee per annum;
LNSIZE = the natural log of the number of members on the audit committee;
ACIND = the proportion of independent directors on the audit committee;
ACEXP = 1 if at least one independent director on the audit committee has an accounting background and 0 otherwise;
FAM = 1 if the CEO or Chairman of the board is a family member and 0 otherwise;

*,**,and *** designate statistical significance at the 0.10, 0.05, and 0.01 levels, respectively. All tests are two-tailed.

Table 4. Regressions Results for Equation 3 and Equation 4

	Family Firm				Non_Family Firm			
	Total Audit Fees		Audit Fees		Total Audit Fees		Audit Fees	
	Coeff.	t-stat	Coeff.	t-stat	Coeff.	t-stat	Coeff.	t-stat
Intercept	2.6884	2.07**	3.687	2.84***	4.1075	2.86***	4.0528	2.79***
LNMEET	0.3941	2.06**	0.4446	2.34**	0.1705	1.16	0.0613	0.41
LNSIZE	0.795	1.61	0.6221	1.27	0.6293	1.08	1.1291	1.92*
ACIND	0.8386	1.79*	0.5597	1.2	0.1873	0.38	0.0288	0.05
ACEXP	-0.0157	-0.14	-0.0724	-0.65	0.1335	1.28	0.0543	0.51
PNED	-0.525	-1.33	-0.2296	-0.58	-0.1501	-0.46	-0.0003	0
LNSUB	0.2551	2.79***	0.2202	2.42**	0.0557	0.57	0.0639	0.65
LNAT	0.2666	4.83***	0.2282	4.15***	0.3441	6.26***	0.3053	5.49***
LNFOR	0.0222	0.35	-0.006	-0.09	0.0418	0.75	-0.0092	-0.16
LNSEGB	-0.0407	-0.31	-0.0467	-0.35	0.105	0.9	0.1043	0.89
LNSEGG	0.15227	1.83*	0.1218	1.47	0.1668	2.24**	0.1569	2.09**
DE	0.0077	0.59	0.0026	0.2	-0.002	-0.18	0.0018	0.17
ROA	-0.4699	-1.3	-0.3465	-0.97	-0.3649	-1.25	-0.4592	-1.55
BIG4	0.3274	2.9***	0.357	3.18***	0.3887	3.39***	0.3347	2.89***
INVREC	-0.0878	-0.35	-0.03978	-0.16	0.4889	1.8*	0.5724	2.09**
AOP	-0.0162	-0.08	0.0234	0.11	-0.0152	-0.08	-0.0911	-0.46
QUICK	-0.0009	-0.06	-0.0017	-0.11	0.0118	0.97	0.012	0.98
YE	0.0385	0.42	-0.0141	0.15	-0.0056	-0.06	-0.568	-0.64
LNSALE	0.135	2.55**	0.1397	2.65	0.035	0.73	0.0491	1.01
N		214		214		224		224
Adj.R-SQ		0.5625		0.5202		0.6329		0.5996
P-value of F-stat		<0.001		<0.001		<0.001		<0.001

LNTAF = the natural log of total audit fees;
LNAF = the natural log of audit fees;
PNED = the proportion of non-executive directors on the board;
LNSUB = the natural log of number of subsidiaries;
LNAT = the natural log of total assets;
LNFOR = the natural log of number of foreign subsidiaries;
LNSEGB = the natural log of number of business segments;
LNSEGG = the natural log of number of geographical segments;
DE = long-term debt divided by total assets;
ROA = income before extraordinary items divided by previous year's total assets;
BIG4 = 1 if the auditor is a Big 4 audit firm and 0 otherwise;
INVERC = inventory plus accounts receivable divided by total assets;
Quick = current assets minus inventory divided by current liabilities;
AOP = 0 if an unqualified report is issued and 1 otherwise;
YE = 1 if the final day of the financial year is Dec. 31;
LNSALE = the natural log of total sales;
LNMEET = the natural log of the number of meetings held by the audit committee per annum;
LNSIZE = the natural log of the number of members on the audit committee;
ACIND = the proportion of independent directors on the audit committee;
ACEXP = 1 if at least one independent director on the audit committee has an accounting background and 0 otherwise;

*,**,and *** designate statistical significance at the 0.10, 0.05, and 0.01 levels, respectively. All tests are two-taile