

РАЗДЕЛ 3
КОРПОРАТИВНОЕ
УПРАВЛЕНИЕ
В АЗИИ

SECTION 3
NATIONAL PRACTICES OF
CORPORATE GOVERNANCE:
ASIA



FAMILY CONTROL, AUDITOR INDEPENDENCE, AND AUDIT
QUALITY: EMPIRICAL EVIDENCE FROM THE TSE-LISTED
FIRMS (1999-2002)

*Ching-Lung Chen**, *Gili Yen***, *Chung-Jen Fu****, *Fu-Hsing Chang*****

Abstract

The present study posits that auditors have weaker bargaining power when facing clients with ultimately controlling family members as opposed to clients without. By analyzing clients' magnitude of discretionary accruals in company with audit reports, the present study examines empirically the influence of family-controlled clients on the audit quality. The empirical results, as expected, reveal that the magnitude of discretionary accruals of a family-controlled firm, given receiving a standard unqualified audit report, is significantly larger than a firm that has no ultimately controlling family members. Moreover, family-controlled firms with larger positive discretionary accruals, as expected, are more likely to receive a standard unqualified audit report than clients without ultimately controlling shareholders. The above empirical results suggest that the audit quality is indeed deteriorated when an auditor faces a family-controlled client.

Keywords: family-controlled firm; bargaining power; auditor independence; discretionary accruals; audit quality

*Department of Accounting, Chaoyang University of Technology, 168 Jifong E. Rd.,

Wufong Township, Taichung County 41349, Taiwan, R.O.C. Tel: 04-23323000#4415. Fax: 04-23742359. E-mail: clchen@cyut.edu.tw

**Department of Business Administration, Chaoyang University of Technology, 168 Jifong E. Rd., Wufong Township, Taichung County 41349, Taiwan, R.O.C. Tel: 886-4-23323000#4351. Fax: 886-4-23742359. E-mail: gyen@cyut.edu.tw

***Department of Accounting, National Yunlin University of Science & Technology, 123 Section 3, University Road, Touliu, Yunlin County, Taiwan, R.O.C. E-mail: fucj@yuntech.edu.tw

****Department of Accounting, National Yunlin University of Science & Technology, 123 Section 3, University Road, Touliu, Yunlin County, Taiwan, R.O.C. E-mail: fschang@yuntech.edu.tw

1. Introduction

The firm is one form of legal fiction which serves as a nexus for contracting relationships. And, the agency relationship can be defined as a contract under which the decision-maker (the principal) engage another person(s) (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent. (Jensen & Meckling, 1976).

A common assumption in the contract theory is that the principal makes a take-it-or-leave-it proposal and has all the bargaining power over the agent (Inderst, 2002).¹ However, if there is only one suitable agent, it is reasonable to assume that the contracted agent shall enjoy some bargaining power. The audit engagement is a contract between the auditor and the client, where the auditor shares bargaining power with the client originating from professional ethics, auditing standards, and specialized skills.² Viewed from such contracting perspective, the audit report is a concurrently interactive end product between the auditor and the client, the bargaining power adhered to these two players will play an important role in the implementation of the mutually agreed contract.

There are a fair number of studies discuss the influences of bargaining power embedded in the auditor-client relationship on auditor independence (i.e., Goldman & Barlev, 1974; Emby & Davidson, 1998; Windsor & Ashkanasy, 1995; and Magee & Tseng, 1990). The above studies, except for Magee & Tseng (1990), all indicate that the pressures to violate professional rules of auditing are inherent in the auditor-client relationship, and the auditor's ability to resist such pressures is limited, therefore weakens the independence of the auditor.

Thus, when the clients have stronger bargaining power, we expect the auditors have a greater tendency to compromise their independence that in turn leads to deterioration in audit quality.

If the auditors fail to perform a critical governance constraint role that limits controlling shareholders' abilities to hold up minority shareholders, the controlling shareholders would have a higher degree of freedom to manipulate accounting information.

We are interested in investigating whether auditors in Taiwan in verifying the financial statements of the client can strengthen the corporate governance by assuring the quality of accounting

information when face a firm with controlling shareholders.

Piot (2001) suggests that the appointment of auditor directly results from the vote of the controlling shareholders. La Porta et al. (1999) and Brunello et al. (2003) also indicate that large controlling shareholders and their appointed representatives generally intervene with the key decisions of the firm under their control.

Since family-controlled shareholders can exercise their unanimous bargaining powers over auditors, the auditors are directly exposed to strong bargaining power from them, and then the shadow of pressure will influence auditor's behaviors.

Whether audit quality is deteriorated in the interactive relationship between auditor and family-controlled firm constructs the primary motivation of the present study. We combine audit reports and client's magnitude of discretionary accruals (*MDA*) as the proxy for audit quality, given the clients being issued a standard unqualified audit report (*SUAR*)³. Given issuing standard unqualified audit report, a large magnitude of discretionary accruals represents lenient materiality and relevance thresholds which often implies that auditors bow to the pressure coming from the client, and then call the audit quality into question.

Relatedly, bowing to the pressure coming from ultimately controlling family members, there is a greater tendency for the audit firm to issue loosely a standard unqualified audit opinion, which again provides evidence that audit quality is deteriorated. The empirical results, grounded on receiving a standard unqualified audit report, reveal that the magnitude of discretionary accruals in family-controlled firms' financial statements is significantly larger than that of firms without ultimately controlling shareholders.

Moreover, the family-controlled firm with a larger positive magnitude of discretionary accruals has a statistically higher possibility of receiving a standard unqualified audit report than the firms without ultimately controlling shareholders. Our conjecture that family-controlled clients exert negative influences on audit quality is supported by the evidence.

The next section reviews previous literature and develops testable hypotheses. The specification of empirical models is presented in Section III, and the results from empirical models are reported and discussed in Section IV. We test the robustness of the results in Section V. Finally, Section VI contains conclusions.

¹ There are a fair number of studies modeling the characteristics of optimal contracts rooted in double moral hazard in the economic literature, such as Cooper & Ross (1985), Demski & Sappington (1991), Gupta & Romano (1998), and Kim & Wang (1998). Nevertheless, there are few studies discuss the moral-hazard problem in accounting or auditing literature.

² DeAngelo (1981) shows that quasi rents arise because of the nature of auditing technology that generates costs to client switching auditors. Therefore, Chung & Kallapur (2003) suggest that auditors in the real world have at least some bargaining power.

³ The standard unqualified audit reports in the present study includes a standard report and unqualified opinions with some modifications such as inconsistent in accounting principles in the promulgation of new GAAP and opinion based in part on audit report of an earlier auditor.

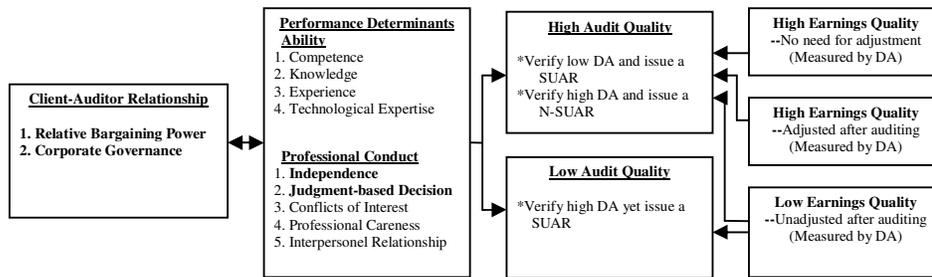
2. Analytic Framework, Litature Review, And Testable Implications

The present study delineates a conceptual framework, which is an integration of the researches of Anthony et al. (1999) and Balsam et al. (2003), to synthesize the relevant audit quality literature to facilitate the inclusion of the bargaining power in examining audit quality related issues. The proposed framework begins with a discussion of determinants of audit quality, to be followed by possible associations between audit quality and the quality of financial reporting. The proposed framework's major constructs and related professional factors are presented in the left side of Figure 1. The testable implications about the association between audit quality and quality of financial reporting are described in the right side of Figure 1.

DeAngelo (1981) defines audit quality as the probability that an auditor will both discover and truthfully report material errors, misrepresentations, or omissions in a client's financial statements. The probability of discovering such "accounting discrepancies" depends on auditor's technical ability and the degree of independence, as Watts and Zimmerman (1986) clearly suggest the probability of reporting discrepancy is a function of honesty. DeAngelo (1981) also indicates that the detection and reporting the discrepancies are unlikely to be separable. Therefore, the study of Anthony et al. (1999) views the probability of reporting errors as dependent on a larger set of variables and depicts audit quality as a function of two broad performance constructs: technical capability and professional conduct. With regard to the relationship between

these two performance constructs and audit quality, previous empirical results suggest: technological ability can reduce auditor start-up and learning costs, thus, auditor ability is positively associated with audit quality. Moreover, empirical findings tend to support a positive association between professional conduct (i.e., independence) and audit quality.

The present study posits that one pivotal construct that may interact with performance determinants and then influence audit quality is client-auditor relationship which is systematically affected by the presence/absence of a family-controlled client. The pioneer study that discusses bargaining power adhered to the auditor-client relationship is Goldman & Barlev (1974). The authors describe the sources of bargaining power between auditor and client and claim that pressures to violate professional rules of conduct are inherent in the auditor-client relationship, and usually the auditor's ability to resist such pressures is limited. Recently, Emby & Davidson (1998) indicate that auditors normally lack a bargaining power and therefore are vulnerable to clients' pressure. Windsor & Ashkanasy (1995) further show that an auditor with lower moral standards would be influenced greatly by the client's bargaining power and would be less likely than one with high moral standard to resist client's request. Nevertheless, Magee & Tseng (1990) indicate that when auditors possess all bargaining power and there is no disagreement among auditors on the proper interpretation of GAAP, clients have nothing to gain by threatening a replacement of incumbent auditors and there is no weakening of auditor independence.



Legends:
 DA: Discretionary Accruals;
 SUAR: Standard Unqualified Audit Report;
 N-SUAR: Non-standard Unqualified Audit Reports

Figure 1 A. Conceptual framework for interaction among determinants of audit quality, auditor independence, and earnings quality

To the best of our knowledge, there are few studies discussing the influence of ultimately controlling shareholders on audit quality. The audit service demanded by firms with controlling

shareholders could be different from that demanded by firms without controlling shareholders. In general, both disagreements over the appropriateness of accounting choices and the impending issuance of

qualified audit report could strain the auditor-client relationship (Schwartz & Menon 1985). Chung & Kallapur (2003) document evidence of a statistically insignificant association between abnormal accruals and strength of client corporate governance as measured by the structure of the board of directors. We know if the board of director is formed by the firm's preeminent officers and controlling family members, the auditor's relationship with the board would be nearly the same as with a unanimous management.

However, when the board has a number of outside members, or when a designated auditing committee contains exclusively of outside board members, a different relationship is formed. Thus, the evidence reported in Chung & Kallapur (2003) that the statistically insignificant association between abnormal accruals and strength of client corporate governance may be caused by failing to take into account the ultimately controlling shareholders who are exercising bargaining power. In a family-controlled firm, the controlling shareholders have a direct access to private information making the board of director powerful, and hence the role of the auditor is left to defend minority interests. Thus, the role played by a controlling family has important implications for understanding the dynamics behind the interaction between the auditor and the client. It provides us with an effective vantage point about whether the audit quality is affected by the presence/absence of ultimately controlling family members.

Figure 1 also covers the aspect whether audit quality is positively associated with financial reporting quality. A huge body of literature has documented that top managers have incentives to manage earnings. These incentives arise out of explicit and implicit contracts that link financial outcomes to the interests of top management. Meanwhile, the quality of the auditor report is one critical factor that restricts the extent to which managers can manage earnings (Balsam et al., 2003). Under conflicting incentives with regard to accounting choices that are potentially related to earnings management, Heninger (2001) finds that lawsuits against auditors are more likely to occur when the client has higher magnitude of discretionary accruals. Nevertheless, we know an audit report is the end product summarizing auditor's opinion which to a great extent relates to the chosen threshold in reaching materiality/relevance judgmental decision. The stricter the threshold is, the lower the possibility of earnings manipulation. Hence, the greater is audit quality. Without a full understanding why a particular threshold is chosen, we cannot directly establish the linkage between audit quality and quality of financial reporting. In addition, the reported accountings numbers are adjusted information after the negotiated procedures between the auditor and the client have been completed.

In the absence of *ex ante* unadjusted accounting numbers to verify the appropriateness of the adjusted numbers, it is difficult to infer audit quality from client's audited financial statements. By incorporating the auditor report as an intermediary variable, the present study is empowered with a clear theoretical link between audit quality and quality of financial reporting.

Moreover, the addition of the auditor report provides the present study the rationale of adopting the quality of reported earnings as a proxy of audit quality to examine the auditor's behavior.

A high quality of financial reporting may arise from the following two possible scenarios: Either, the client provides higher quality of accounting numbers which need not be adjusted; alternatively, the client makes the auditor bend to its wishes, and purposefully manipulates accounting numbers. Regardless of the reasons, given issuing a standard unqualified audit report, it is expected that a higher audit quality is positively associated with a higher quality of financial reporting.

In contrast, a lower quality of financial reporting suggests a haggling outcome of the negotiation interacted between the auditor and the client. Under such circumstances, the auditor may issue either a non-standard unqualified audit report holding professional ethic standards or a standard unqualified audit report compromising his/her independence. We believe the latter audit opinion is deficient in audit quality. Under such circumstances, a higher audit quality is expected to be reflected in the issuance of a non-standard unqualified audit report.

Based on the discussions above, the present study through controlling the auditor's opinion (e.g., a standard unqualified audit report) can effectively establish the logical relationship between audit quality and the earnings quality.

Firstly, given a standard unqualified audit report, a higher quality of financial reporting is expected to be associated with a higher audit quality, and, *vice versa*.

In addition, the lower quality of financial reporting will raise the possibility of issuing the non-standard unqualified audit reports by the higher quality auditors.

The analysis above suggests that the incorporation of the auditor report as an auditor-client intermediary variable into the audit/earnings quality model can provide us with a stronger conceptual rationale and a more clear-cut empirical implication.⁴

⁴ A fair number of studies have examined whether audit quality that measured by the brand name of auditors is associated with the quality of earnings (Becker et al. 1998; Reynolds & Francis 2000; Francis et al. 1999; Teoh & Wong 1993). A recent stream of literature argues that, in addition to brand name, the auditor industry specialization can link auditor quality with earnings quality (Owhoso et al., 2002; Balsam et al., 2003). Nevertheless, we know the audit report is basically a professional product of an

In this regard, Francis & Krishnan (1999) shows that auditors, who lower their threshold in discretionary accruals, are more likely to issue modified audit reports for high-accrual firms to compensate for risk exposure. Bartov et al. (2001) also show the magnitude of discretionary accruals is positively associated with the occurrence of audit qualifications. We combine the quality of earnings as measured by the magnitude of discretionary accruals with audit reports types as a composite indicator for the audit quality. Given issuing a standard unqualified audit report, the larger magnitude of discretionary accruals reported in client's financial statements suggests a more lenient threshold in allowing client's earnings management hence, impairing the quality of auditor report. For the sake of examining the negative relationship between client's bargaining power and audit quality, we use family-controlled firms as an indicator of the presence of a client with a powerful bargaining power. Given audit report, we can then test the association between these firms and magnitude of discretionary accruals. For clients who receive a standard unqualified audit report, a larger magnitude of discretionary accruals in the family-controlled firms would suggest deteriorated audit quality attributable to family-controlled client's stronger bargaining power. Alternatively, if auditor establishes an unusual lenient threshold in magnitude of discretionary accruals to all clients, regardless of the presence/absence of controlling family shareholders, it would be expected that the clients are more likely of receiving a standard unqualified audit report than Non-standard unqualified audit reports (*Non-SUAR*).

When observing family-controlled firms with larger magnitude of discretionary accruals are statistically significant receiving more often a standard unqualified audit report than firms without controlling shareholders, given other variables constant, it is a natural inference that auditors establish more lenient threshold in magnitude of discretionary accruals to their family-controlled clients only, reflecting a deteriorating in the audit quality. The testable hypothesis is therefore established as follows:

Hypothesis: Auditors adopt a more lenient threshold in magnitude of discretionary accruals, then, they will issue more frequently a standard unqualified audit report to their family-controlled clients as opposed to clients without controlling shareholders, which will deteriorate the audit quality.

3. Empirical Analysis

3.1. Samples

The present study covers the research period from 1999 to 2002. The reason that the year 1999 is

chosen as the starting year is because ever since that year the Taiwan Stock Exchange (TSE) has compiled and made publicly available circular information on her Web site to the investors.

The samples are composed of the publicly traded corporations which are listed on the TSE. We have restricted our samples to these firms because the listed firms are subject to the regulation and scrutiny of the Taiwanese Securities and Futures Commission (Taiwan SFC) and TSE.

Moreover, they are required to disclose financial data and release important operational information to the investors. In addition to the benefit of constructing a more or less homogeneous sample, such sample selection also greatly facilitates the collection of the necessary shareholding data to verify the controlling types.

All the financial statement variables used to conduct our empirical analysis are retrieved from Taiwan Economic Journal database (TEJ). We exclude financial institutions (codes 2801 to 2888) because discretionary accruals estimation using industry cross-sectional Jones model (1991) is problematic for these firms.

Moreover, consistent with prior research, we exclude observations where the absolute value of discretionary accruals (*ABDA*) exceeds 200% of the lagged assets (DeFond and Park 1997). We also delete glass-ceramic, paper, and automobile industries because of too few listed firms are in presence for estimating regression coefficients. These selection procedures yield an initial sample of 1,909 firm-year observations.

As presented in Table 1, there are 1,062 firm-year observations receiving a standard unqualified audit report, approximately 55.63% of the initial sample. Restricting the clients offering shares to the public and receiving a standard unqualified audit report, the sample further reduce to 296 observations. Of them, 107 observations are classified as family-controlled firms, 67 are classified as controlled by widespread shareholders or other controlling types, and the remaining 122 are classified as controlled without controlling shareholders.

auditor, not directly related to the auditor's brand name or auditor's industry specialization.

Table 1. Sample Collection and Classification

Explanation	Observations (firm/year)
Initial observations (excluding financial institutions, glass-ceramic, paper, and automobile industries)	1,909
Less: Data insufficiency or omissions	(10)
Available samples which reported types of audit report	1,899
Less: Non-standard unqualified audit reports	(837)
Standard unqualified audit report	1,062
Less: Not offering shares to the public	(766)
Final sample	296
Classified as controlled by a widespread shareholders	65
Classified as controlled by family members	107
Classified as controlled by other controlling types	2
Classified as controlled without controlling shareholders	122

3.2. Variables

Classification Variable for Audit Report: Dummy for Audit Report (DAR)

The possible statistically significant and positive relationship between magnitude of discretionary accruals and the dummy for family-controlled firm may arise from two different reasons. On the one hand, auditor may establish a relatively lenient threshold in magnitude of discretionary accruals to family-controlled firms.

On the other hand, auditor may establish a generally lenient threshold in magnitude of discretionary accruals for all their clients and neither the magnitude of discretionary accruals reported in family-controlled firms' financial statement nor that is reported in without controlling shareholders firms' financial statement is exceeding the threshold. In order to ascertain that the empirical results are not originating from the latter possibility, we examine the interactive behaviors between auditor and family-controlled firms by controlling auditor reports.

The studies of Hopwood et al. (1989) and Choi & Jeter (1992) point out that a strategic auditor may decide to issue an unjustifiable unqualified audit report for fear of unwilling replacement. In viewing our sample firms rarely receiving qualified opinion⁵, we combine the non-standard unqualified audit report and all qualified audit reports into one group "Non-SUARs". Thus, the type of auditor report is corresponding to a dichotomous dummy variable. It is denoted by $DAR_i=1$ if auditor firms issues a non-standard unqualified audit report, otherwise, $DAR_i=0$.

Dependent Variable for Audit Quality: Discretionary Accrual (DA)

The pivotal dependent variable is discretionary accruals (DA). Because the industry structures experience large variation on many occasions and the sample firms do not have sufficient time series data

to estimate the parameters of the model, we measure DA using the cross-sectional variation of the Jones (1991) model⁶ as reported in DeFond & Jiambalvo (1994). Subramanyam (1996) indicates that this technique is generally approximate for this type empirical data. The present study estimates DA as the prediction error from firm-specific ordinary least squares regressions:

$$TA_{ijt} = \alpha_i + \beta_{1i} * \Delta REV_{ijt} + \beta_{2i} * PPE_{ijt} + \epsilon_{ijt} \quad (1)$$

where

$$TA_{ijt} = \text{Total accruals} \quad TA_{ijt} = \Delta \text{Current assets}_{ijt} - \Delta \text{Cash}_{ijt} - \Delta \text{Current Liabilities}_{ijt} \\ + \Delta \text{Current portion of long-term debt}_{ijt} \\ - \text{Depreciation and amortization}_{ijt}$$

ΔREV_{ijt} = Revenues of the j th sample firm in year t minus revenues in year $t-1$ in the i th industry;

PPE_{ijt} = Gross property, plant, and equipment in year t for the j th sample firm in the i th industry;

$i = 1 \dots i$, referring to the i th industry;

$j = 1 \dots j$, referring to the j th sample firm in a given sample industry;

t = sample year.

Discretionary accruals (DA_{ijt}) are the prediction errors from applying the Jones model to estimate nondiscretionary accruals in the year of examination:

$$DA_{ijt} = TA_{ijt} - (\hat{\alpha}_i + \hat{\beta}_{1i} * \Delta REV_{ijt} + \hat{\beta}_{2i} * PPE_{ijt}) \quad (2)$$

We use lagged total assets to scale estimated discretionary accruals and each variable in the model.

We firstly follow the studies by Warfield et al. (1995), Francis et al. (1999), and Frankel et al. (2002) and use the absolute value of discretionary accruals (ABDA) as the dependent variable to examine the relationship between client with ultimately controlling family and its magnitude of discretionary accruals. However, Kinney and Martin (1994) demonstrate that the year-end audited number is seen as a direct reduction in pre-audit net earnings and pre-audit net assets bringing about a positive bias in the financial statements. This implies the undiscovered misstatements may differ systematically from those detected because auditors may concentrate on detecting overstatements of

⁵ There are 8 observations receiving qualified audit reports and 156 observations receiving modified unqualified audit reports out of the total 393 observations.

⁶ Guay et al. (1996) indicate that the Jones (1991) can generate more efficient parameter estimators about discretionary accruals than other models.

earnings and assets. We adopt Chow test (1960) to check whether the auditor's asymmetric behavior exists in the sample. The examination indicates that auditors indeed asymmetrically concentrate on positive/negative discretionary accruals (*PDA/NDA*).⁶ Thus, we further divide the total samples into *PDA* and *NDA* sub-samples in testing whether the hypothesis that magnitude of discretionary accruals reported in family-controlled firms are larger than that reported in firms without controlling shareholders is different from each other in the two sub-samples, respectively.

Main Explanatory Variables for Audit Quality

Our first main explanatory variable is the dummy for family-controlled firms (*DFCF*). $DFCF_i=1$ if a firm receives a standard unqualified audit report and is controlled by a family; otherwise, $DFCF_i=0$. We follow the classification technique suggested by La Porta et al. (1999) to identify the ultimate controlling shareholders and define a corporation that has a controlling shareholder if this particular shareholder's direct and indirect voting rights combined in that firm exceed 20%. We define a family-controlled firm by the presence of a person or a family being the controlling shareholder.

There are four other control types: namely, being classified as controlled by widespread shareholders; alternatively, being controlled by the state; by a widely held financial institution; or controlled by miscellaneous controlling shareholders⁷. There are 65 observations, which are classified as "widely held". The bargaining power of these firms involves the corporations' complicate governance structures, and we do not know clearly the discretions enjoyed by members on the board of directors in those firms. Furthermore, firms being classified into other types are quite few and we thus also exclude these three control types from our empirical analysis.

Therefore, the present study restricts the major empirical analysis to the family-controlled firms and discusses later the widely held corporations in Section 5.

The cutoff of 20% is used because of: (1) APB No.18 requires that an investor use the equity method when he is able to exercise significant influence over the operating and financial policies of the firm he invests. In reality, an investor owning 20% or more of the outstanding common stock is presumably able to exert significant influence. (2) We find that if the cutoff is set at 10%, approximately 86.35% will be classified as family-

controlled firms.⁸ Obviously, it is not an appropriate classification scheme. All told, our final sample consists of 229 firm-year observations, of which 107 observations are classified as family-controlled firms and 122 observations are classified as controlled without ultimate controlling shareholders.

A standard unqualified audit report states that the financial statements are presented adequately in all material respects, and, are in conformity with the GAAP. This conclusion may be expressed when the auditor has formed such an opinion both on the basis of an audit performed in accordance with GAAS and in line with his economic incentives. If the auditor established identical thresholds and issued opinions based on the financial statements being reported in accordance with GAAS, we expect the magnitude of discretionary accruals among differential clients would not be significantly different from each other when they received a standard unqualified audit report.

Therefore, given receiving a standard unqualified audit report, we expect to observe a significant difference in the magnitude of discretionary accruals between family-controlled firms and firms without ultimately controlling shareholders, which can be attributed to the relative strength of bargaining powers in presence of ultimately controlling shareholders. Put it differently, in the audit quality model the present study expects the coefficient of the pivotal variable *DFCF* to be positive to reflect the family-controlled firms' stronger bargaining power.

In the audit report model, following the study of Bartov et al. (2001) that examine discretionary accruals model and audit qualifications, we use the interactive explanatory variable calculated between variables dummy for family-controlled firms (*DFCF*) and absolute value of discretionary accruals (*ABDA*) to capture the association between *DAR* and $DFCF*ABDA$. It is expected that the coefficient of the interactive variable $DFCF*ABDA$ will be negative, which reflects that the family-controlled firms receives more frequently standard unqualified audit report than firms without controlling shareholders.

Control Variables

There are other considerations affecting the audit decision in verifying the choices of accounting methods, the magnitude of discretionary accruals, and the reporting of the accounting numbers. We follow prior studies and introduce seven related explanatory variables in the empirical analysis to enhance the reliability of the estimates.

The seven variables are: auditor brand name proxied by auditor firm size; structural changes in

⁶ The F value is 22.43, which is statistically significant at 0.01 significance level.

⁷ Only China Steel Corporation and Yang Ming Marine Transport Corporation can be classified as virtually state controlled firms in the sense that both chairperson of the board and the president of the company are appointed by the government.

⁸ The ratios at 10% cutoff for controlling types from the studies of Yeh & Lee (2000) and Claessens et al. (1999) are 81.4% and 65.6%, respectively.

audit environment using the Enron event as the watershed; industry' dominance effect; client's size, operating cash flow, debt to asset ratio, and market to book value ratio.

Brams & Doherty (1993) and Gul (1991) claim that the ability of a big auditor firm to resist management pressures is relatively higher than a small auditor firm. We expect the coefficient of this control variable to be negative to reflect that the big auditor firms presumably have more independence to resist pressure coming from the clients. Bannister & Wiest (2001) find that clients have reported a decreased discretionary accrual during the period that their auditor is subject to an investigation related to an SEC enforcement action.

If the Enron audit failure effect spreads, then the auditor's behaviors will become more conservative and cautious. We control this auditing structural change to capture the possible conservatism from Enron audit failure and expect that the coefficient of this control variable to be negative in *ABDA* model and positive in *DAR* model to reflect the possible ever-increasing conservatism in the auditing market following the Enron disaster.

Wang et al. (2003) find that the electronic industries have apparently dominated traditional industries and suggest strong industry effect in their study. If there is an electronic industry effect, the auditors may be more active in seeking customers and make their judgments strategically in this particular industry. It worth trying to incorporate a dummy variable for electronic industry (*DEI*) into the model to examine whether it exerts perceptible influences on the auditors' behaviors. We expect the coefficient of *DEI* to be positive in *ABDA* model and negative in *DAR* model to reflect the auditors' overriding concern for firms in the dominant electronic industry.

Becker et al. (1998) suggest that the firm size of the client might surrogate numerous omitted variables and its inclusion improve the goodness of fit of the specified model.

We include the natural logarithm of total market value of the equity to control for the potential effects of firm size on the magnitude of discretionary accruals. Since we scaled the Jones model (1991) by the lagged total assets, we follow the studies by Warfield et al. (1995) and use the natural logarithm of lagged total market value as a proxy for client's size.

Dechow et al. (1995) recommend incorporating the firm performance measures into the earnings management regression model to control the measurement error for the extreme observations. Bauwhede et al. (2003) also suggest that we can use the operating cash flows to alleviate the potential misspecification.

We expect that firms with sufficient operating cash flow be in less need of income-increasing manipulation.

If debt ratio (*DR*) can substitute for the auditor's audit risk, given issuing a standard unqualified audit report, auditor may suppress the income-increasing manipulation to trade-off the increased audit risk owing to a higher debt ratio.

In this situation, the association between *DR* and dependent variable *ABDA* will be negative. Warfield et al. (1995) find a positive, but statistically insignificant, association between market to book value ratio (*PBR*) and the magnitude of discretionary accruals.

Since higher growth opportunity suggests a decrease in the auditor's audit risk, assuming all audit risk are kept constant, the threshold of discretionary accruals for high growth opportunity firms could be set at a more lenient level than that for low growth opportunity firms.

It is expected that the coefficient of *PBR* is to be positive in *ABDA* model to reflect the decrease in auditor total audit risk for firms with ample growth opportunities.

The descriptive statistics for each variable of this study in the *ABDA* model is presented in Table 2. Panel A of Table 2 presents the descriptive statistics for each variable for the entire sample.

Panel B and Panel C of Table 2 present the descriptive statistics for the *PDA* and *NDA* sub-samples, respectively. Panel A indicates that the mean of *DFCF* is approximately 46.72%. Namely, 47% of our samples are classified as family-controlled firms, which it is not significantly different from the studies of Claessens et al. (1999) and Yeh & Lee (2000), where family-controlled firms account for 48.2% and 51.44% of their samples, respectively. Panel B and Panel C show that the means of *DFCF* are approximately 52% in the *PDA* sub-sample and 40% in the *NDA* sub-sample, respectively.

These preliminary descriptive statistics reveal that there are more family-controlled firms engaging in income-increasing manipulation than in income-decreasing manipulation. It is also found that the descriptive statistics for each variable in *DAR* model are similar to *ABDA* model⁹.

Only the average of *DCAE* is relatively small in the *ABDA* model. It indicates that auditors issuing less frequently a standard unqualified audit report after the Enron event. Table 3 presents the correlation coefficients among the related variables.

⁹ We have 393 observations in the *DAR* regression that includes 210 observations coming from the *PDA* sub-sample and the rest observations are coming from the *NDA* sub-sample.

Table 2. Descriptive Statistics of the Variables in the ABDA Model

Panel A: The entire sample (N=229)							
Variable	Mean	Standard deviation	Min	1st Quarter	Median	3rd Quarter	Max
ABDA	0.0895	0.1045	0.0002	0.0319	0.0678	0.1065	0.9886
DFCF	0.4672	0.5000	0	0	0	1	1
DAB	0.8253	0.3805	0	1	1	1	1
DCAE	0.1572	0.3648	0	0	0	0	1
DEI	0.7336	0.3648	0	0	0	0	1
FS	8.3609	1.4584	5.6595	7.2654	8.1516	9.0916	14.2027
OCF	0.0804	0.1534	-0.7454	0.0146	0.0730	0.1266	0.7224
DR	0.3734	0.1499	0.0051	0.2588	0.3738	0.4909	0.7036
PBR	2.7244	2.8697	0.0600	1.0000	1.7600	3.2700	22.5300
Panel B: The positive discretionary accruals sub-sample (N=127)							
ABDA	0.0987	0.1183	0.0007	0.0358	0.0730	0.1151	0.9886
PDA	0.0987	0.1183	0.0007	0.0358	0.0730	0.1151	0.9886
DFCF	0.5197	0.5016	0	0	1	1	1
DAB	0.7717	0.4214	0	0	1	1	1
DCAE	0.1890	0.3993	0	0	0	0	1
DEI	0.7323	0.4445	0	0	0	0	1
FS	8.3251	1.4050	5.6595	7.2731	8.1823	9.2565	12.8465
OCF	0.0142	0.1338	-0.7454	-0.0241	0.0329	0.0755	0.3176
DR	0.3654	0.1560	0.0743	0.2486	0.3612	0.4808	0.7036
PBR	2.9072	3.0917	0.3700	1.1600	1.9200	3.3700	0.2253
Panel C: The negative discretionary accruals sub-sample (N=102)							
ABDA	0.0781	0.0833	0.0002	0.0251	0.0578	0.1003	0.5666
NDA	-0.0781	0.0833	-0.5666	-0.1003	-0.0578	-0.0251	-0.0002
DFCF	0.4020	0.4927	0	0	0	1	1
DAB	0.8922	0.3117	0	1	1	1	1
DCAE	0.1176	0.3238	0	0	0	0	1
DEI	0.7451	0.4380	0	0	1	1	1
FS	8.4055	1.5281	6.1399	7.1717	8.1124	8.9060	14.2027
OCF	0.1629	0.1358	-0.1220	0.0833	0.1210	0.2084	0.7224
DR	0.3833	0.1420	0.0051	0.2733	0.3849	0.5034	0.6931
PBR	2.4968	2.5634	0.0600	0.9500	1.4400	2.5225	12.0500

Legends: *ABDA_i*: Absolute value of discretionary accruals of client *i*; *PDA_i*: Positive discretionary accruals of client *i*; *NDA_i*: Negative discretionary accruals of client *i*; *DFCF_i*: Dummy for type of control of the corporation; *DFCF_i*=1 if it is a firm that there is an ultimately controlling family and receives a *SUAR*, otherwise, *DFCF_i*=0; *DAB_i*: Dummy for audit brand name of client *i*; *DAB_i*=1 if the *i*th client is audited by the Big 5 auditor firms, otherwise, *DAB_i*=0; *DCAE_i*: Dummy for changes in audit environment using the Enron Event as the watershed; *DCAE_i*=1 if it is an observation that falls after year 2001, otherwise, *DCAE_i*=0; *DEI_i*: Dummy for electricity industry of client *i*, *DEI_i*=1 if the *i*th client belongs to the electricity industry; *FS_i*: Firm sizes; the natural logarithm of total market value of the equity of client *i*; *OCF_i*: Operating cash flows scaled by the lagged total assets of client *i*; *DR_i*: Debts to assets ratio of client *i*; *PBR_i*: Market to book value ratio of client *i*.

Table 3. Pearson and Spearman Correlation Coefficients of the Variables

	ABDA	DFCF	DAB	DCAE	DEI	FS	OCF	DR	PBR
ABDA		0.1445** (0.0289)	-0.0320 (0.6301)	0.0066 (0.9211)	0.0465 (0.4841)	0.0285 (0.6676)	-0.2786*** (0.0001)	0.0179 (0.7878)	0.0729 (0.2720)
DFCF	0.0485 (0.4649)		-0.1455** (0.0277)	-	-0.1881** (0.0043)	-0.2481** (0.0001)	-0.0071 (0.9149)	-0.0476 (0.4737)	-0.0022 (0.9741)
DAB	-0.0264 (0.6915)	-0.1455** (0.0277)		-0.0541 (0.4153)	0.2952*** (0.0001)	0.2878*** (0.0001)	0.1966*** (0.0028)	-0.1685** (0.0107)	0.0745 (0.2618)
DCAE	0.1029 (0.1205)	-0.0197 (0.7664)	-0.0541 (0.4153)		-0.0011 (0.8669)	0.0243 (0.7151)	-0.0438 (0.5093)	0.0381 (0.5662)	-0.1242* (0.0606)
DEI	0.0757 (0.2540)	-0.1881*** (0.0043)	0.2952*** (0.0001)	-0.0011 (0.8669)		0.3861*** (0.0001)	0.0675 (0.3092)	-0.1090* (0.0999)	0.2521*** (0.0001)
FS	-0.0118 (0.8587)	-0.2662*** (0.0001)	0.3188*** (0.0001)	0.0081 (0.9033)	0.4099*** (0.0001)		0.2003*** (0.0023)	-0.1719*** (0.0091)	0.4568*** (0.0001)
OCF	-0.1620** (0.0141)	-0.0079 (0.9056)	0.2264*** (0.0006)	-0.0577 (0.3847)	0.0990 (0.1353)	0.2325*** (0.0004)		-0.1987*** (0.0025)	0.1765*** (0.0074)
DR	0.0651 (0.3271)	-0.0428 (0.5190)	-0.1689** (0.0105)	0.0425 (0.5226)	-0.1054 (0.1119)	-0.1691** (0.0104)	-0.2179*** (0.0009)		-0.2293*** (0.0005)
PBR	0.0091 (0.2732)	-0.0471 (0.4778)	0.1348 (0.0416)	-0.1148 (0.0830)	0.4245*** (0.0001)	0.5929*** (0.0001)	0.2347*** (0.0003)	-0.2977*** (0.0001)	

1. Legends: *ABDA_i*: Absolute value of discretionary accruals of client *i*; *DFCF_i*: Dummy for type of control of the corporation; *DFCF_i*=1 if it is a firm that there is an ultimately controlling family and receives a *SUAR*, otherwise, *DFCF_i*=0; *DAB_i*: Dummy for audit brand name of client *i*; *DAB_i*=1 if the *i*th client is audited by the Big 5 auditor firms, otherwise, *DAB_i*=0; *DCAE_i*: Dummy for changes in audit environment using the Enron Event as the watershed; *DCAE_i*=1 if it is an observation that falls after year 2001, otherwise, *DCAE_i*=0; *DEI_i*: Dummy for electricity industry of client *i*, *DEI_i*=1 if the *i*th client belongs to the electricity industry; *FS_i*: Firm sizes; the natural logarithm of total market value of the equity of client *i*; *OCF_i*: Operating cash flows scaled by the lagged total assets of client *i*; *DR_i*: Debts to assets ratio of client *i*; *PBR_i*: Market to book value ratio of client *i*. 2. Upper triangular reports Pearson correlation coefficients while lower triangular reports Spearman correlation coefficients. 3. The symbols *, **, and *** indicate the correlation coefficients are significant at the 10%, 5%, and 1% level, respectively, in a two-tailed tests.

As shown in Table 3, the correlations between *DFCF* and other variables are generally low and statistically insignificant, except for the client's firm size (*FS*). To examine whether discretionary accruals are connected with *DFCF* and *FS*, we examine the variance inflation factor (VIF) and find the VIFs for the control variables are all below two. Since Neter et al. (1989) suggest that only VIFs in excess of 10 are deemed evidence of significant multicollinearity, hence, the independent variables used in this study do not appear to be severely affected by the multicollinearity problems. However, to check the robustness of our empirical results, we will discuss the highly correlated controlling variables in the Section V.

The Specification of the Estimation Models

The hypothesis is tested via the following two regression models. The first model employed can be specified as:

$$ABDA_i = \alpha + \beta_1 * DFCF_i + \beta_2 * DAB_i + \beta_3 * DCAE_i + \beta_4 * DEI_i + \beta_5 * FS_i + \beta_6 * OCF_i + \beta_7 * DR_i + \beta_8 * PBR_i + \epsilon_i \quad (3)$$

ABDA_i: Absolute value of discretionary accruals of client *i*;

DFCF_i: Dummy for type of control of the corporation; *DFCF_i*=1 if it is a firm that there is an ultimately controlling family and receives a *SUAR*, otherwise, *DFCF_i*=0;

DAB_i: Dummy for audit brand name of client *i*; *DAB_i*=1 if the *i*th client is audited by the Big 5 auditor firms, otherwise, *DAB_i*=0;

DCAE_i: Dummy for changes in audit environment using the Enron Event as the watershed; *DCAE_i*=1 if it is an observation that falls after year 2001, otherwise, *DCAE_i*=0;

DEI_i: Dummy for electricity industry of client *i*, *DEI_i*=1 if the *i*th client belongs to the electricity industry, otherwise, *DEI_i*=0;

FS_i: Firm size, measured by the natural logarithm of total market value of the equity of client *i*;

OCF_i: Operating cash flows scaled by the lagged total assets of client *i*;

DR_i: Debt to asset ratio of client *i*;

PBR_i: Market to book value ratio of client *i*.

Based on empirical results from the model as specified in Equation (3), we find that auditors indeed asymmetrically concentrate on *PDA/NDA* sub-samples.

We therefore further test whether the observed difference in the reported magnitude of discretionary

accruals of different control types exists in the *PDA/NDA* sub-samples. The regression model is the same as specified in Equation (3), only the dependent variable is replaced by *PDA_i* or *NDA_i*.

The empirical analysis from equation (3) can only infer whether reported magnitude of discretionary accruals in family-controlled firms vs. without ultimately controlling shareholders firms are different for firms receiving a standard unqualified audit report.

In order to ascertain that the empirical results are not resulting from the auditor's establishing a lenient threshold in magnitude of discretionary accruals for all clients, we follow Bartov et al. (2001) and specify the logistic regression model as follows:

$$DAR_i = \alpha + \beta_1 * ABDA_i + \beta_2 * ABDA_i * DFCF_i + \beta_3 * DAB_i + \beta_4 * DCAE_i + \beta_5 * DEI_i + \beta_6 * FS_i + \beta_7 * OCF_i + \beta_8 * DR_i + \beta_9 * PBR_i + \epsilon_i \quad (4)$$

DAR_i: Dummy for audit reports of client *i*; *DAR_i*=0 if the *i*th client has received a standard unqualified audit report, otherwise, *DAR_i*=1.

We also test whether the causality relationship of being issued a *SUAR* only exist in the *PDA* sub-sample. It is expected that the regression coefficients on both *ABDA*DFCF* and *PDA*DFCF* will be statistically significant and negative to reflect that the family-controlled firms with discretionary accruals are more likely to receive a standard unqualified audit report than firms without ultimately controlling shareholders.

4. Empirical Results

Table 4 presents the results of equation (3). The model is statistically significant at the 1% level. After controlling for other explanatory variables, the regression coefficient on the main explanatory variable, *DFCF*, is 0.036(*t*=2.58) in the entire sample.

The positive and significant coefficients on *DFCF* reveal that, as predicted, given receiving a standard unqualified audit report, the magnitude of discretionary accruals reported in family-controlled firms' financial statements is statistically significantly larger than that in firms without controlling shareholders.

In other words, the empirical results suggest that family-controlled firms have larger magnitude of discretionary accruals that can be attributed to the stronger bargaining power of the client.

The first hypothesis is supported by the empirical results.

Table 4. Family-controlled Firms and Magnitude of Discretionary Accruals

$$ABDA_i = \alpha + \beta_1 * DFCF_i + \beta_2 * DAB_i + \beta_3 * DCAE_i + \beta_4 * DEI_i + \beta_5 * FS_i + \beta_6 * OCF_i + \beta_7 * DR_i + \beta_8 * PBR_i + \epsilon_i$$

$$DA_i = \alpha + \beta_1 * DFCF_i + \beta_2 * DAB_i + \beta_3 * DCAE_i + \beta_4 * DEI_i + \beta_5 * FS_i + \beta_6 * OCF_i + \beta_7 * DR_i + \beta_8 * PBR_i + \epsilon_i$$

Independent Variables	Dependent Variable (ABDA, PDA, and NDA)					
	The Entire Sample		PDA Sub-sample		NDA Sub-sample	
	ABDA	VIF	PDA	VIF	NDA	VIF
<i>Intercept</i>	0.024957 (0.50)	0	0.017011 (0.38)	0	0.051525 (1.06)	0
<i>DFCF</i>	0.035906*** (2.58)	1.11016	0.023359* (1.90)	1.19753	-0.00579 (-0.45)	1.16425
<i>DAB</i>	0.003823 (0.20)	1.20644	-0.01244 (-0.83)	1.25160	-0.01569 (-0.79)	1.10063
<i>DCAE</i>	0.001718 (0.09)	1.03074	0.022905 (1.57)	1.03554	0.001173 (0.06)	1.14916
<i>DEI</i>	0.010994 (0.68)	1.26050	0.006492 (0.42)	1.50715	0.000616 (0.04)	1.17471
<i>FS</i>	0.005304 (0.93)	1.58123	0.012911*** (2.43)	1.75163	-0.00127 (-0.25)	1.77798
<i>OCF</i>	-0.21241*** (-4.70)	1.10366	-0.77679*** (-17.50)	1.10852	-0.48963*** (-9.73)	1.34667
<i>DR</i>	0.002153 (0.05)	1.11149	-0.09701*** (-2.47)	1.18116	-0.10544*** (-2.39)	1.13141
<i>PBR</i>	0.003207 (1.12)	1.38809	0.003128 (1.53)	1.25922	0.006798** (2.12)	1.95188
N	229		127		102	
Adj. R ²	0.0898		0.7137		0.4954	
F value	3.81***		40.27***		13.40***	

1. Legends: *ABDA*: Absolute value of discretionary accruals of client *i*;

PDA: Positive discretionary accruals of client *i*;

NDA: Negative discretionary accruals of client *i*;

DFCF: Dummy for type of control of the corporation; *DFCF*=1 if it is a firm that there is an ultimately controlling family and receives a *SUAR*, otherwise, *DFCF*=0;

DAB: Dummy for audit brand name of client *i*; *DAB*=1 if the *i*th client is audited by the Big 5 auditor firms, otherwise, *DAB*=0;

DCAE: Dummy for changes in audit environment using the Enron Event as the watershed; *DCAE*=1 if it is an observation that falls after year 2001, otherwise, *DCAE*=0;

DEI: Dummy for electricity industry of client *i*, *DEI*=1 if the *i*th client belongs to the electricity industry;

FS: Firm sizes; the natural logarithm of total market value of the equity of client *i*;

OCF: Operating cash flows scaled by the lag total assets of client *i*;

DR: Debts to assets ratio of client *i*;

PBR: Market to book value ratio of client *i*.

2. The symbols *, **, and *** indicate the regression coefficients are significant at the 10%, 5%, and 1% level, respectively, in a two-tailed tests.

Negative and statistically significant regression coefficient is reported for *OCF* ($t=-4.70$). This result, as expected, corroborates the studies by Dechow et al. (1995) and Becker et al. (1998). It indicates that firms with sufficient operating cash flows have smaller magnitude of discretionary accruals. As for other control variables, the coefficients are all statistically insignificant.

To test whether the auditor asymmetrically concentrates on *PDA/NDA*, the regression results of the *PDA/NDA* sub-samples are presented in the right columns of Table 4. As shown in Table 4, the regression coefficient on the main explanatory variable, *DFCF*, is 0.023 ($t=1.90$), both positive and statistically significant at the 10% level, in the *PDA* sub-sample. However, the regression coefficient on *DFCF* is -0.00579 ($t=-0.45$) and is statistically insignificant in the *NDA* sub-sample. These empirical results suggest that, given receiving a standard unqualified audit report, the larger magnitude of discretionary accruals that reflect the relatively stronger bargaining power of the client only exists in the positive discretionary accruals. It suggests that auditors' incentives to compromise their independence with family-controlled clients are

eminent in the *PDA* sub-sample, but not in the *NDA* sub-sample.

Overall speaking, the positive and statistically significant regression coefficient on the main explanatory variable, *DFCF*, in *ABDA* model in Table 4 can be attributed to the *PDA* sub-sample. The result again confirms our conjecture that the presence of an ultimately controlling family seriously damages audit quality.

The regression coefficients on the control variable, *OCF*, are both negative and statistically significant at the 1% level, in the *PDA* and *NDA* sub-samples. It suggests that a larger operating cash flow leads to a reduction in income-increasing manipulation.

The negative and statistically significant regression coefficients on *DR* in the *PDA* and *NDA* sub-samples, given issuing a standard unqualified audit report, indicates that auditor suppress the income-increasing manipulation to trade-off the increased audit risk. The positive regression coefficients on *PBR* in the *PDA* and *NDA* sub-samples, as expected, indicate that a greater client's growth opportunity leads to a beef up in income-increasing manipulation.

Now, let us turn to the empirical results of the logistic regression *DAR* model in Equation (4) to discuss whether both statistically significant and positive relationship between magnitude of discretionary accruals and *DFCF* enhances the possibility of establishing a relatively lenient threshold in magnitude of discretionary accruals for the family-controlled firms. According to the above discussions of the empirical results, the positive and statistically significant regression coefficient on the main explanatory variable, *DFCF*, in *ABDA* model

can be attributed to the *PDA* sub-sample. We therefore only examine the entire sample and the *PDA* sub-sample.

The sample used consists of 393 firm-year observations, of which 156 observations are classified as family-controlled firms (49 observations receiving non-standard unqualified audit reports) and 237 as firms without ultimate controlling shareholders (115 observations receiving non-standard unqualified audit reports). The empirical results are presented in Table 5.

Table 5. Discretionary Accruals and Audit Quality: Family-controlled Firm

$$DAR_i = \alpha + \beta_1 * ABDA_i + \beta_2 * ABDA_i * DFCF_i + \beta_3 * DAB_i + \beta_4 * DCAE_i + \beta_5 * DEI_i + \beta_6 * FS_i + \beta_7 * OCF_i + \beta_8 * DR_i + \beta_9 * PBR_i + \varepsilon_i$$

Independent Variables	Dependent Variable (<i>DAR</i>)	
	Total Samples	<i>PDA</i> Sub-samples
<i>Intercept</i>	-3.838870*** (-4.46)	-3.485404*** (-2.65)
<i>ABDA</i> or <i>PDA</i>	1.044903 (0.55)	2.725488 (0.80)
<i>ABDA*DFCF</i> or <i>PDA*DFCF</i>	-3.466805* (-1.67)	-5.503960* (-1.86)
<i>DAB</i>	0.411252 (1.23)	1.127455** (2.17)
<i>DCAE</i>	0.839031*** (3.48)	1.159994*** (3.11)
<i>DEI</i>	-0.675261*** (-2.45)	-1.439394*** (-3.38)
<i>FS</i>	0.411724*** (4.29)	0.492575*** (3.01)
<i>OCF</i>	-1.319105 (-1.34)	-6.627003*** (-2.40)
<i>DR</i>	0.957782 (1.14)	-1.439154 (-1.11)
<i>PBR</i>	-0.275620*** (-3.11)	-0.311119** (-1.97)
<i>N</i>	393	210
McFadden R-square	0.122778	0.200364
<i>LR statistic</i>	65.56495***	56.46952***
Convergence achieved after 5 iterations in these two models		

- Legends: *DAR_i*: Dummy for audit reports of client *i*; *DAR_i*=0 if the *i*th client is received the *SUAR*, otherwise, *DAR_i*=1;
ABDA_i: Absolute value of discretionary accruals of client *i*;
PDA_i: Positive discretionary accruals of client *i*;
DFCF_i: Dummy for type of control of the corporation; *DFCF_i*=1 if it is a firm that there is an ultimately controlling family and receives a *SUAR*, otherwise, *DFCF_i*=0;
DAB_i: Dummy for audit brand name of client *i*; *DAB_i*=1 if the *i*th client is audited by the Big 5 auditor firms, otherwise, *DAB_i*=0;
DCAE_i: Dummy for changes in audit environment using the Enron Event as the watershed; *DCAE_i*=1 if it is an observation that falls after year 2001, otherwise, *DCAE_i*=0;
DEI_i: Dummy for electricity industry of client *i*, *DEI_i*=1 if the *i*th client belongs to the electricity industry;
FS_i: Firm sizes; the natural logarithm of total market value of the equity of client *i*;
OCF_i: Operating cash flows scaled by the lagged total assets of client *i*;
DR_i: Debts to assets ratio of client *i*;
PBR_i: Market to book value ratio of client *i*.
- The symbols *, **, and *** indicate significance at the 10%, 5%, and 1% level, respectively, in a two-tailed test.

After controlling for other explanatory variables, the logistic regression coefficients on the interactively explanatory variable in Table 5, *ABDA*DFCF* and *PDA*DFCF*, are -3.467 ($t=-1.67$) and -5.504 ($t=-1.86$), respectively. The negative and statistically significant coefficients on *ABDA*DFCF* and *PDA*DFCF* suggest that the family-controlled firms have a statistically higher possibility of receiving a standard unqualified audit report than the firms without controlling shareholders.

Therefore, it is reasonable to infer that auditors establishing a lenient threshold in magnitude of discretionary accruals to all clients may be not the

“driver”. In other words, the empirical results of Table 5 suggest that the auditors establish a relatively lenient threshold in magnitude of discretionary accruals to their family-controlled firms only, inducing a higher possibility to issue a standard unqualified audit report to them than to firms without controlling shareholders. Viewed from such perspective, our hypothesis has again obtained empirical support.

Positive and statistically insignificant regression coefficients are reported for the pivotal explanatory variable in both *ABDA* and *PDA* models. As for other control variables, the coefficients on *DCAE*

and *DEI* all have the expected signs and are statistically significant in both *ABDA* and *PDA* models. The positive coefficient on *DCAE* suggests auditors tend to issue more frequently a non-standard unqualified audit report after Enron to reflect the deteriorating auditing environment. The negative coefficient on *DEI* suggests that the electricity industry is more likely to receive a standard unqualified audit report than other industries.

The other three control variables, the coefficients on *DAB*, *OCF* and *PBR* all have the expected sign and are statistically significant in both *ABDA* and *PDA* models. The positive coefficient on *DAB* suggests Big 5 auditor firms issuing more frequently non-standard unqualified audit reports than their competitors.

The negative coefficient on *OCF* suggests auditors issuing more frequently standard unqualified audit report when their clients have sufficient operating cash flows. The negative coefficient on *PBR* suggests that the greater growth opportunity the clients have, the more likely the auditor will issue a standard unqualified audit report. In summary, the variable *DFCF* under examination in alternative models is found to exert significant influences on firm's magnitude of discretionary accruals and the outcome of the audit report. The reinforcing empirical findings reported from the logistic regression model further increases the confidence in our major tests. Thus, it is safe to conclude that, when facing a client of an ultimately controlling family, an auditor is more likely to compromise its independence by issuing more frequently an unqualified audit report, and, at the same time, allowing the client to report a relatively larger magnitude of accounting accruals. Taking the empirical findings all together, it implies that the audit quality is indeed impaired when the auditor faces a client with controlling family members.

5. Robustness Check

The present study is motivated to test whether the magnitude of discretionary accruals of firms controlled by widespread shareholders (*WHCF*) have differential patterns than the firms without ultimately controlling shareholders. If the magnitude of discretionary accruals is smaller for *WHCF* as compared with the family-controlled firms, we can infer that the existence of ultimately controlling shareholders indeed exert a significant impact to influence the magnitude of discretionary accruals reported in client's financial statement. We replace the family-controlled firms by the firms controlled by widespread shareholders and rerun Equation (3). The results from rerunning Equation (3) show that the coefficient on the dummy for *WHCF* is 0.007 ($t=1.22$). In other words, there is no statistically significant difference in the magnitude of discretionary accruals between *WHCF* and firms without ultimately controlling shareholders. Thus,

the statistically significant larger magnitude of discretionary accruals found in family-controlled firms seems to come from the strong and unanimous bargaining power exerted by the controlling family as evidenced by the existence of ultimately controlling shareholders. The results of other explanatory variables, as expected, are similar to what reported in the family-controlled firms. According to the above results, we can reasonably infer that when the auditor is directly exposed to the strong and unanimous bargaining power from family-controlled firms, the shadow of pressures will impair the audit quality in the sense that the auditor allows its client to report an larger magnitude of discretionary accruals.

Secondly, since the restrictions imposed on the family-controlled sub-sample reduce substantially the size of usable sample, we adopt the interactive variable "*DAB*DFCF*" to develop alternative model to examine the relationship between auditor's firm size and family-controlled firms' magnitude of discretionary accruals.¹⁰ The results show that the coefficient on *DFCF* is approximately the same as in the initial examination, both positive and statistically significant in the *ABDA* and the *PDA* samples. It is found that the regression coefficients on *DAB*DFCF* is -0.046 ($t=-1.27$) in the entire sample and -0.045 ($t=-1.68$) in the *PDA* sub-sample. Thus, the initial empirical results are unlikely caused by the limited sample size.

In another test, we use client's total sales as a proxy for client's size¹¹ and delete the control variables *DR* and *PBR* which are not statistically significant in the entire sample, and instead include Zmijewski's (1984) financial condition index (*ZINDEX*) to control for the effect of the client's financial condition.

Since a larger *ZINDEX* numerical value suggests the clients' financial condition is in a worse shape, given issuing a standard unqualified audit report, the auditor may suppress more aggressively the magnitude of discretionary accruals to trade-off the increased audit risk represented by the higher *ZINDEX*. We expect that the association between *ZINDEX* and *ABDA* to be negative. The regression coefficient on *DFCF* in the test is 0.036 ($t=2.61$). Moreover, the regression coefficient on *ZINDEX* is both negative and statistically insignificant. The results of other control variables are similar to what reported in the initial examination.

Therefore, the above reported empirical results remain intact regardless whether the client's size is measured by lagged assets, or, sales. The empirical results are also not affected by the inclusion of Zmijewski's index. In addition, in order to avoid the large variance of *OCF* to influence the empirical

¹⁰ The employed regression model is specified as:

$ABDA_i = \alpha + \beta_1 * DFCF_i + \beta_2 * DAB_i + \beta_3 * DAB_i * DFCF_i + \beta_4 * DCAE_i + \beta_5 * DEI_i + \beta_6 * FS_i + \beta_7 * OCF_i + \beta_8 * DR_i + \beta_9 * PBR_i + \epsilon_i$

¹¹ When replaced by client's total sales, the correlation coefficient between *DFCF* and natural logarithm of total sales reduces to -0.08531 ($p=0.3257$).

results, we delete four extreme observations that lie outside three standard deviations. The regression coefficient on the *DFCF* from the remaining observations is 0.021 ($t=2.02$), remains positive and statistically significant at 5% level. It seems that the extreme observations are unlikely to distort the empirical results.

6. Conclusions

Clients hire and fire auditors. The relationship that auditing firms strive to develop with the clients may impose the auditors psychological difficulties in making truly independent judgment (Bazerman et al. 1997). Because auditor appointment is directly resulted from the vote of the controlling shareholders, it is expected that it is less likely that the auditor will maintain his/her independence and audit quality facing controlling family members. We focus on client's discretionary accruals manipulation and audit reports to examine the impacts of ultimately controlling family on audit quality.

The empirical results, grounded on issuing a standard unqualified audit report, reveal that the magnitude of discretionary accruals of family-controlled firms is significantly larger than that of firms without ultimately controlling shareholders. Moreover, the family-controlled firms with larger positive discretionary accruals have a statistically higher possibility of receiving a standard unqualified audit report than the firms without controlling shareholders.

Therefore, we conclude that audit quality is deteriorated when the auditor faces a client that has ultimately controlling family. We have run some diagnostic checks and have found that our major empirical results are robust to various specifications and measurement biases.

References

1. Anthony, H., Jr. Catanach, and P. L. Walker. 1999. The international debate over mandatory auditor rotation: a conceptual research framework. *Journal of International Accounting, Auditing & Taxation* 8: 43-66.
2. Balsam, S., J. Krishnan, and J. S. Yang. 2003. Auditor industry specialization and earnings quality. *Auditing: A Journal of Practice & Theory* 22.
3. Bannister, J. W. and D. N. Wiest. 2001. Earnings management and auditor conservatism: Effects of SEC enforcement actions. *Managerial Finance* 27: 57-71.
4. Bartov, E., A. F. Gul, and S. L. Tsui. 2001. Discretionary-accruals models and audit qualifications. *Journal of Accounting & Economics* 30: 421-452.
5. Bauwhede, H. V., M. Willekens, and A. Gaeremynck. 2003. Audit firm size, public ownership, and firms' discretionary accruals management. *International Journal of Accounting* 38: 1-22.
6. Bazerman, M. H., K. P. Morgan, and G. F. Loewenstein. 1997. The impossibility of auditor independence. *Sloan Management Review* 38.
7. Becker, C. L., M. L. DeFond, J. Jiambalvo, and K. R. Subramanyam. 1998. The effect of audit quality on earning management. *Contemporary Accounting Research* 15: 1-24.
8. Brams, S. J. and A. Doherty. 1993. Intransigence in negotiations: The dynamics of disagreement. *Journal of Conflict Resolution* 37: 692-708.
9. Brunello, G., C. Graziano, and B. M. Parigi. 2003. CEO turnover in insider-dominated boards: The Italian case. *Journal of Banking & Finance* 27: 1027-1051.
10. Choi, S. & D. Jeter. 1992. The effects of qualified audit opinion on earnings response coefficients. *Journal of Accounting and Economics* 22.
11. Chow, G. 1960. Tests of equality between sets of coefficients in two linear regressions. *Econometrica* 28: 591-605.
12. Chung, H. and S. Kallapur. 2003. Client importance, nonaudit services, and abnormal accruals. *Accounting Review* 78: 931-955.
13. Claessens, S., S. Djankov, and L. H. P. Lang. 1999. Who control East Asian corporation. *Policy Research Working Paper*, The World Bank.
14. Cooper, R. and T. W. Ross. 1985. Product warranties and double moral hazard. *The Rand Journal of Economics* 16: 103-114.
15. DeAngelo, L. 1981. Auditor independence, lowballing, and disclosure regulation. *Journal of Accounting and Economics* 3: 113-127.
16. Dechow, P., R. Sloan, and A. Sweeney. 1995. Detecting earning management. *Accounting Review* 70: 193-225.
17. DeFond, M. and J. Jiambalvo. 1994. Debt covenant violation and manipulation of accruals. *Journal of Accounting and Economics* 17: 145-176.
18. DeFond, M. L. and C. W. Park. 1997. Smoothing income in anticipation of future earnings. *Journal of Accounting and Economics* 23: 115-140.
19. Demski, J. S. and D. E. M. Sappington. 1991. Resolving double moral hazard problems with buyout agreements. *The Rand Journal of Economics* 22: 232-241.
20. Emby, G. and R. Davidson. 1998. The effects of engagement factors on auditor independence: Canadian evidence. *Journal of International Accounting, Auditing & Taxation* 7: 163-179.
21. Francis, J. K. and J. Krishnan. 1999. Accounting accruals and auditor reporting conservatism. *Contemporary Accounting Research* 19: 135-165.
22. Francis, J. R., E. L. Maydew, and H. C. Sparks. 1999. The role of Big Six auditors in the credible reporting of accruals. *Auditing: A Journal of Practice and Theory* 18: 17-35.
23. Frankel, R., J. Marilyn, and K. Nelson. 2002. The relations between auditors' fee for non-audit services and earning quality. Working paper, *Sloan School of Management, MIT*.
24. Goldman, G. and B. Barlev. 1974. The auditor-firm conflict of interests: Its implications for independence. *Accounting Review* 49: 707-718.
25. Guay, W. P., S. P. Kothari, and R. L. Watts. 1996. A market-based evaluation of discretionary accruals models. *Journal of Accounting Research* 34.

26. Gul, F. 1991. Size of audit fees and perceptions of auditors' ability to resist management pressure in audit conflict situations. *Abacus* 27: 162-172.
27. Gupta, S. and R. E. Romano. 1998. Monitoring the principal with multiple agents. *The Rand Journal of Economics* 29: 427-443.
28. Heninger, W. G. 2001. The association between auditor litigation and abnormal accruals. *The Accounting Review* 76: 111-126.
29. Hopwood, W., J. McKeown, and J. Mutchler. 1989. A test of the incremental explanatory power of opinions qualified for consistency and uncertainty. *Accounting Review* 64: 28-48.
30. Inderst, R. 2002. Contract design and bargaining power. *Economics Letters* 74: 171-177.
31. Jensen, M. and W. Meckling. 1976. Theory of the firm: managerial behavior, agency costs, and ownership structure. *Journal of Financial Economics* 3: 305-360.
32. Jones, J. 1991. Earnings management during import relief investigations. *Journal of Accounting Research* 29: 193-228.
33. Kim, S. K. and S. Wang. 1998. Linear contracts and the double moral-hazard. *Journal of Economic Theory* 82: 342-378.
34. Kinney, W. and R. Martin. 1994. Does auditing reduce bias in financial reporting? A review of audit-related adjustment studies. *Auditing: A Journal of Practice and Theory* 13: 149-159.
35. La Porta, R., F. Lopez-de-Silanes, and A. Shleifer. 1999. Corporate ownership around the world. *Journal of Finance* 54: 471-517.
36. Magee, R. and M. Tseng. 1990. Audit pricing and independence. *Accounting Review* 65:315-336.
37. Neter, J., W. Wasserman, and M. H. Kutner. 1989. *Applied linear regression models*. Homewood, IL: Irwin.
38. Owghoso, V. E., W. F. Messier, Jr., and J. G. Lynch, Jr. 2002. Error detection by industry-specialized teams during sequential audit review. *Journal of Accounting Research* 40: 883-900.
39. Piot, C. 2001. Agency costs and audit quality: Evidence from France. *European Accounting Review* 10: 461-499.
40. Reynolds, J. K. and J. R. Francis. 2000. Does size matter? The influence of large clients on office-level auditor reporting decisions. *Journal of Accounting and Economics* 30: 375-400.
41. Schwartz, K. & K. Menon. 1985. Auditor switches by failing firms. *Accounting Review* 60: 248-261.
42. Teoh, S. H. and T. J. Wong. 1993. Perceived auditor quality and the earnings response coefficient. *Accounting Review* 68: 346-366.
43. Wang, C., C. Lee, & B. Huang. 2003. An analysis of industry and country effects in global stock returns: Evidence from Asian countries and the U.S. *Quarterly Review of Economics & Finance* 43.
44. Warfield, T. D., J. J. Wild and K. L. Wild. 1995. Managerial ownership, accounting choices, and informativeness of earnings. *Journal of Accounting and Economics* 20: 61-91.
45. Watts, R. L. and J. L. Zimmerman. 1986. *Positive Accounting Theory* (Prentice Hall: Englewood Cliffs, NJ).
46. Windsor, C. A. and N. M. Ashkanasy. 1995. The effect of client management bargaining power, moral reasoning development, and belief in a just world on auditor independence. *Accounting, Organizations and Society* 20: 701-720.
47. Yeh, Y. H. and T. S. Lee. 2000. Corporate governance and performance: the case of Taiwan. *Paper presented at the Seventh Asia Pacific Finance Association Annual Conference*, Shanghai, China.
48. Zmijewskis, M. E. 1984. Methodological issues related to the estimation of financial distress prediction models. *Journal of Accounting Research* 22: 59-82.