

The Role Of Audit Committee Independence, Auditor Tenure, And Their Interaction On Managers' Accounting Discretion

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Abstract

This study examines the role of audit committee independence and auditor tenure on client managers' accounting discretion. It also examines the impact of the interaction between independent audit committees and long lasting auditors on managers' accounting discretion. The results show that independent audit committees lower managers' accounting discretion and auditor tenure is negatively associated with managers' accounting discretion. In addition, this study provides evidence that the interaction between independent audit committees and external auditors having long-term relationships has an incremental effect on the managers' reporting flexibility.

Introduction

Users of financial statements and regulators are very concerned with the quality and reliability of companies' financial reporting. In order to enhance the quality of financial information, the Securities Exchange Commission (SEC) and major stock markets require that publicly traded companies maintain audit committees and be audited by external auditors. Both the firms' audit committees and external auditors monitor the fairness of the firms' financial reports.

McMullen (1996) and Dechow *et al.* (1996) find that firms with audit committees are able to reduce the incidence of errors and irregularities. Prior studies have also found that independent audit committees are associated with higher quality financial reports (Beasley 1996; Carcello and Neal 2000). As a subcommittee of the board of directors, the audit committee's primary responsibilities include overseeing management's accounting practices, promotion of high quality and timely disclosure of corporate information, reviewing the adequacy of the internal control system, and external auditor selection and retention (Blue Ribbon Committee 1999). In addition, audit committees act as a liaison between management and independent auditors. As a liaison, audit committees closely interact and communicate with external auditors in several ways. For example, audit committees review the audit schedule, examine audited financial reports, and discuss the scope and results of the auditors' examination with external auditors. In addition, Statement on Auditing Standards (SAS) No. 61 and SAS No. 90 require auditors to make oral or written communications with audit committees on numerous topics.¹

Turner (1999) raised concerns that the quality of financial reports may deteriorate as client managers develop long-lasting relationships with their auditor. In addition, he expressed that the SEC may consider enforcing mandatory auditor rotation in order to enrich the quality of financial reporting resulting in new, relatively independent auditors examining financial reports. However, accounting professionals have argued that such a rotation could undermine the quality of the reports, permitting earnings manipulation, because new auditors are

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relatively inexperienced with their client's issues. The AICPA (1992) also asserts that there is a positive relationship between tenure and audit quality and that mandatory rotation would most likely impair, not enhance, audit quality.

One of important roles of audit committees is to serve as an intermediary to improve communication between the board, management and external auditors (Verschoor 1993). Abbott and Parker (2000) argue that independent audit committees are more likely to retain auditors that have provided good quality assurance services. In addition, Meixner and Welker (1988) suggest that interaction between two contracting parties increases as tenure increases. Thus, independent audit committees that have retained external auditors for longer periods of time are more likely to actively interact with external auditors and with management. This active interaction leads auditors to a better understanding of the issues. Greater knowledge allows the auditor to grant management more accrual discretion since they better know the true values of the balance sheet (Dye and Verrecchia 1995; Subramanyam 1996). Thus, the interaction between independent audit committees and long-lasting auditors may allow managers more accounting discretion. On the other hand, it would also be possible that when both monitoring mechanisms are present, managers would be allowed to exercise even less discretion. Thus, the net effect of the interaction is an empirical question.

This study is motivated by the fact that prior managers' accounting discretion studies have not simultaneously considered two important aspects of corporate governance (i.e., audit committee independence and auditor tenure). This study also provides a link between the two aspects by examining the joint effect of the two governance mechanisms on accounting discretion. In addition, this study is motivated by SAS No. 90, which amends SAS No. 61 and SAS No. 71 and encourages a three-way discussion and communication among the audit committee, the auditor, and the client managers. The results of this study show that audit committee independence and auditor tenure are negatively associated with managers' accounting discretion. In addition, the interaction between independent audit committees and long-lasting external auditors is positively associated with client managers' accounting flexibility.

Development of Hypotheses

Relationship Between Audit Committee Independence And Accounting Discretion

One of the important responsibilities of the audit committees suggested by the BRC (1999) is to ensure high quality of accounting practices and financial reporting. Various attributes of audit committee characteristics have recently received increased academic and regulatory scrutiny. In relation to the role of audit committees on external auditors, Carcello and Neal (2000) examine the association between the audit committee independence and going-concern audit reports. They find that the greater the percentage of affiliated directors on the audit committee, the lower the probability the auditor will issue a going-concern report. Abbott and Parker (2000) examine the association between audit committee effectiveness and auditor selection. They find that firms with audit committees that do not include employees and that meet at least twice per year are more likely to employ an industry-specialist auditor. In examining the direction of auditor switches, Abbott and Parker (2001) find that firms with effective audit committees are more likely to increase auditor quality at the time of auditor switch. Beasley (1996) finds that the proportion of outside members of the board of directors is positively associated with the likelihood of financial statement fraud. In relation to the role of audit committees on the quality of financial reporting, Beasley *et al.* (1999) find that independent audit committees significantly reduce the likelihood of financial misstatement. All of the above studies collectively confirm the BRC's assertion that independent audit committees monitor client managers' accounting discretion and oversee independent auditors' participation in the financial reporting process. Therefore, firms with independent audit committees are less likely to exercise accounting discretion. Thus,

Hypothesis 1: There is a significant negative association between audit committee independence and managers' accounting discretion.

Relationship Between Auditor Tenure And Earnings Management

The role of auditor tenure on audit quality or on auditors' economic bonding with management has been debated (Beck *et al.* 1988; Turner 1999). Using a weighted quality score based on 232 quality control review letters the Audit Division of the Texas Education Agency conducted between 1984 and 1989, Deis and Giroux (1992) find audit quality is negatively associated with auditor tenure. Their findings may suggest that as auditors develop a long-term relationship with a client, the economic bond between the auditor and the client managers may be strengthened.

On the other hand, the AICPA (1992) argues that audit quality increases with auditor tenure and that mandatory rotation would most likely impair audit quality.² In support, St. Pierre and Anderson (1984) find that auditors of new clients (three years or less in the engagement) commit more errors and experience higher legal risk than auditors with a tenure greater than three years. Based on audit committee members' responses, Knapp (1991) finds that as auditors gain more experience with a client, the likelihood of discovering material errors increases. Their findings suggest that, when the tenure increases, the auditor is more experienced on a particular client's business and risks and subsequently is able to provide higher quality assurance services. More recently, Geiger and Raghunandan (2002) find that long-tenured auditors are more efficient in the collection and evaluation of evidence than short-tenured auditors as they develop an in-depth knowledge of their clients' financial status and operating systems. Thus,

Hypothesis 2: There is a significant negative association between auditor tenure and managers' accounting discretion.

*Impact Of The Interaction Between An Independent Audit Committee And Auditor Tenure
On Managers' Accounting Discretion*

As indicated by the BRC (1999), SAS No. 90 (1999), and Independence Standards Board Standard No.1 (1998, Independence Discussions with Audit Committees), communication and interaction between the audit committee and the outside auditor is crucial and is reviewed favorably by the investing public and regulators. However, the effect of such an interaction on client managers' accounting discretion remains unexplored.

Abbott and Parker (2000) suggest that independent audit committees that meet at least twice a year and high quality auditors share a common goal, which is ensuring higher quality financial reports. Two contracting parties with a common goal are expected to develop a long-term relationship (Greenberg and Baron 1997). However, previous studies relating to auditor tenure have failed to consider the role of audit committees in the selection and retention of external auditors, which directly affect auditor tenure. Effective audit committees are more likely to keep the same auditors as long as auditors provide high quality assurance services.³ In other words, auditors with longer tenure may simply be the result of satisfactory assurance services. In addition, Meixner and Welker (1988) suggest that interaction between two contracting parties increases as tenure increases. As a result of the common goal and subsequent increases in tenure, independent audit committees, who have long-lasting relationships with external auditors, will generate a higher degree of confidence regarding auditors' assurance services. At the same time, auditors view that an independent audit committee is an indication of strong internal controls and that the committee increases the confidence in the propriety of client managers' financial reporting (Romney and Steinbart 1999, p. 259). Outside audit committee members are also likely to be more confident with financial reports audited by external auditors who have developed good relationships with them (Abbott *et al.* 2001a).

Dye and Verrecchia (1995) argue that expanding discretion in accounting choice becomes desirable as the communication of a firm's financial condition and the observability of a contract between current shareholders and managers improve. The communication and the observability are likely to be improved through a long-lasting relationship between independent audit committees and external auditors as audit committees act as a liaison between the board of directors, management, and external auditors. Dye and Verrecchia also show that by increasing accounting discretion, firms could reduce internal agency problems between current shareholders and their managers and improve the efficiency of investment. In addition, Subramanyam (1996) finds that managerial accounting discretion measured in discretionary accruals could improve the ability of earnings to reflect economic value.

The communication of a firm's financial condition could be improved as independent audit committees actively interact with their external auditors. Greater knowledge of long term auditors who have developed mutual trust with effective audit committees allows auditors to grant management more flexibility in accounting procedures. Therefore, after controlling for audit committees independence, auditor tenure, and other factors on managers' accounting discretion, firms that have independent audit committees with long-lasting relationships with external auditors may experience greater managers' accounting discretion as the result of an improved communication and/or the mutual trust between effective audit committees and external auditors.

At the same time, external auditors who have developed long lasting relationships with independent audit committees are able to perform their assurance services more effectively as they have the full support of an independent audit committee (Abbott *et al.* 2001b).⁴ In addition, while hypotheses 1 and 2 implicitly assumes that managers' accounting discretion is negatively associated with monitoring via independent audit committees and long-lasting auditors, it would be equally plausible to posit that when both monitoring mechanisms are present, managers would be allowed to exercise even less discretion. Thus, after controlling for the respective effect of audit committee independence and auditor tenure on client managers' accounting discretion, the role of the interaction between these two governance mechanisms should also be of interest. Thus,

Hypothesis 3: There is a significant association between the interaction of auditor tenure and independent audit committees and managers' accounting discretion.

Research Design

Measures Of Accounting Discretions

DeFond and Jiambalvo (1991) show that client managers have incentives to report earnings increase. DeGeorge *et al.* (1999) find that a disproportionately large percentage of firms in their sample show an earnings increase, which also suggests that managers are motivated to show an improvement in their firms' short-term earnings performance. However, several studies also show that managers sometimes have incentives to report lower earnings. DeFond and Park (1997), for example, find that managers sometimes use income reducing discretionary accruals to smooth earnings, while Watts and Zimmerman (1986), among others, argue that firms often minimize political costs using discretionary accruals to reduce earnings. When client managers use discretionary accruals to achieve their earnings objectives, their auditors face increased litigation risk. This is because the opportunistic use of discretionary accruals conceals a firm's true performance and in some cases violates generally accepted accounting principles and/or results in fraud. To reduce their litigation risk, outside director audit committee members and external auditors have incentives to decrease managers' reporting flexibility (i.e., reduce opportunistic use of income increasing *and* decreasing accruals).

To proxy for client managers' reporting flexibility, the absolute value of discretionary accruals (*DACCR*) measured using the Modified Jones model (Dechow *et al.* 1995) is used. Dechow *et al.* (1995) and Bartov *et al.* (2001) show that the Modified Jones model is superior to other models for measuring discretionary accruals. Model parameters are estimated using cross-sectional rather than time-series data because this mitigates problems due to data unavailability for some estimation periods and structural changes in firms over time. This also controls for changing economic conditions and events that affect discretionary accruals over time, as well as, examines samples of firms with a short history, reducing survivorship bias. For each firm *i*, for each year, discretionary accruals (*DACCR*) are estimated by subtracting the predicted level of non-discretionary accruals (*NDAP*) from total accruals (*TA*), i.e., $DACCR_i = TA_i - NDAP_i$.⁵

Governance Characteristics Used To Explain Client Managers' Accounting Discretion

Consistent with Scarbrough *et al.* (1998), the audit committee independence (*ACIND*) is defined as a dummy variable (i.e., 1 if there is no employee/ gray directors in the audit committee, and 0 otherwise).⁶ Auditor tenure used to test Hypothesis 2 is the number of years that an auditor remains with the same client firm, beginning with 1981. Values of this variable range from a low of 1 to a high of 18. An interaction dummy variable

($ACIND * AUDTEN$) is included to examine how the interaction between audit committee independence and auditor tenure affects managers' accounting discretion and is used to test Hypothesis 3.

Previous studies (DeAngelo 1981; DeFond and Subramanyam 1998; Francis *et al.* 1999; among others) have argued that Big 6 auditors provide higher levels of audit assurance and prefer conservative accounting when compared to Non-Big 6 auditors. Therefore, included is a variable, $AUDTYPE$, which takes a value of 1 for Big 6 auditors and 0 otherwise.

Other Control Variables Used To Explain Client Managers' Accounting Discretion

Before testing hypotheses on how managers' accounting discretion is associated with the audit committee, auditor tenure, and their interaction, several factors must be included (hereafter collectively called $CNTRL$). Several studies indicate that discretionary accruals may be related to firm size. For example, Lang and Lundholm (1993) suggest that large firms have incentives to disclose financial information more accurately to avoid litigation, which suggests that discretionary accruals may be negatively associated with client size. To control for firm size, the natural log of total assets ($SIZE$) is included in the tests. Barth *et al.* (1999) and Dechow and Skinner (2000) argue that growth firms have capital-market incentives to manage earnings to meet earnings' benchmarks. To control for firm growth ($GROWTH$), percentage change in total assets is used. Watts and Zimmerman (1986, 1990) suggest that bonuses provide managers with strong incentives to manage earnings, while DeFond and Jiambalvo (1993) argue that management compensation is positively related to earnings growth. Therefore, percentage changes in net income from the previous to the current year for earnings growth (ΔNI) is included. Prior studies suggest that financially distressed firms may have incentives to manage their earnings to avoid or defer a debt covenant violation or bankruptcy (Watts and Zimmerman 1986; Healy and Palepu 1990; DeFond and Jiambalvo 1994; DeAngelo and DeAngelo 1994). In order to control for financial risk, Altman's (1983) Z-score ($ZSCORE$) is included. Finally, leverage ($LEVERAGE$) (long term debt divided by total assets) is included because previous studies argue that leverage is positively associated with managers' incentive to increase accounting accruals (Bowen *et al.* 1981; Dhaliwal *et al.* 1982; Watts and Zimmerman 1986).⁷

Empirical Model

The following regression model is then used to test the hypotheses:

$$|DACCR|_i = \alpha_0 + \beta_1 ACIND_i + \beta_2 AUDTEN_i + \beta_3 ACIND * AUDTEN_i + \gamma_1 AUDTYPE_i + \sum_k \omega_k CNTRL_i + \varepsilon_i$$

All variables in the regression are defined previously. If client managers' accounting discretion decreases significantly due to audit committee independence and auditor tenure, β_1 and β_2 will be negatively statistically significant. In addition, if the interaction between audit committees independence and auditor tenure is associated with managers' accounting flexibility, β_3 will be statistically significant.

Empirical Analyses

Sample selection

The initial sample drawn from Compustat contains all actively traded firms on the Compustat that have fiscal years ending December 31, 1998 (excluding ADRs). The sample firms are limited to the firms with two-digit SIC industry codes from 01 through 39 to simplify data collection.⁸ Then, firms that are not listed on the New York Stock Exchange (NYSE), the American Stock Exchange (AMEX), or the National Association of Securities Dealers Automated Quotations system (NASDAQ) are removed. There remain 2,182 firms that meet the above criteria. Then, the requirements that the firms (1) have financial data used in the model, (2) have auditors during the period, and (3) have audit committee data in the SEC's EDGAR database decreased the sample to 980 firms. Lastly, firms

that have an auditor code of 9 on the Compustat are eliminated as it could represent different local auditors. These procedures leave the final sample of 903 firms.

TABLE 1: Sample Selection and Descriptive Statistics

Panel A. Sample Selection Procedures

Procedures	Number of Observations
Group A: All actively traded firms on the Compustat whose fiscal years ending December 31, 1998	6,439
Group B: Group A firms who belong to SIC industry codes from 01 through 39	2,425
Group C: Group B firms who are listed in NYSE, AMEX, and NASDAQ	2,182
Group D: Group C firms whose financial and auditor data are available on the Compustat	1,221
Group E: Group D firms whose proxy statements are available for audit committee characteristics	980
Firms from Group E whose auditor codes on the Compustat are not 9	903

Panel B. Descriptive Statistics for Independent Variables

N = 903

Variables	Mean	Median	St. Dev.
Test Variables:			
<i>ACIND</i>	0.7774	1.0000	0.4162
<i>AUDTEN</i>	7.7780	6.0000	6.0024
<i>ACIND*<i>TEN</i></i>	6.1627	4.0000	6.3039
Control Variables:			
<i>AUDTYPE</i>	0.9523	1.0000	0.2130
<i>SIZE</i>	5.5536	5.3915	2.0777
<i>GROWTH</i>	0.2177	0.0730	0.7327
<i>DNI</i>	-0.6424	-0.1190	25.6575
<i>ZSCORE</i>	3.0238	2.6490	5.6830
<i>LEVERAGE</i>	0.2426	0.1940	0.2303

Variable definitions:

ACIND = Audit committee independence, which is 1 if audit committee is solely composed of outside non-employee/non-gray directors, and 0 otherwise.

AUDTEN = Auditor tenure, which is the number of years that an auditor remains with the same client firm.

*ACIND**TEN** = Interaction between *ACIND* and *AUDTEN*.

AUDTYPE = Auditor type, which is 1 if Big 6, and 0 otherwise.

SIZE = Natural log of total assets.

GROWTH = Percentage change in total assets from the previous to the current year.

ΔNI = Percentage change in net income from the previous to the current year.

ZSCORE = Altman's (1983) z-score.

LEVERAGE = Long term debt / Total assets.

Descriptive Statistics

Descriptive statistics for variables used in the regression are presented in Table 1, Panel B. The table shows that about 78 percent of the sample has independent audit committees, the mean tenure for an auditor is 7.8 years, and 95 percent are audited by Big 6 auditors.⁹ The parametric t-test (non-parametric Wilcoxon-Rank-Sum) test indicates that absolute discretionary accruals of firms with independent audit committees are statistically smaller than those of firms with not-independent audit committees at one (five) percent level (not reported), suggesting that managers with independent audit committees have less reporting flexibility. Next, when comparing long auditor tenure firms with those of relatively short tenure, both tests indicate that absolute discretionary accruals of long tenure firms are statistically significantly smaller than those of short tenure at one percent level, suggesting that managers with long lasting auditors have less reporting flexibility.¹⁰

Regression Results

TABLE 2: Client Managers' Accounting Discretion: The Effect of Audit Committee Effectiveness, Auditor Tenure, and Their Interaction

N = 903

$$|DACCR|_i = \alpha_0 + \beta_1 (ACIND \text{ or } AEFF)_i + \beta_2 AUDTEN_i + \beta_3 (ACIND * AUDTEN \text{ or } ACESS * AUDTEN)_i + \gamma_1 AUDTYPE_i + \sum_k \omega_k CNTRL_i + \varepsilon_i$$

Variables	Expected Sign	(A) Estimated Coefficients (t-value)	(B) Estimated Coefficients (t-value)	(C) Estimated Coefficients (t-value)
<i>Intercept</i>	+/-	0.1503 (12.21)***	0.1363 (11.55)***	0.1291 (12.26)***
<u>Test Variables:</u>				
<i>ACIND</i>	-	-0.0453 (-5.23)***		-0.0200 (-3.93)***
<i>ACEFF</i>	-		-0.0260 (-3.43)***	
<i>AUDTEN</i>	-	-0.0038 (-4.62)***	-0.0025 (-3.98)***	-0.0011 (-2.91)***
<i>ACIND*TEN</i>	+/-	0.0038 (4.19)***		
<i>ACEFF*TEN</i>	+/-		0.0027 (3.55)***	
<u>Control Variables:</u>				
<i>AUDTYPE</i>	-	0.0138 (1.30)	0.0110 (1.03)	0.0100 (1.01)
<i>SIZE</i>	-	-0.0079 (-6.49)***	-0.0083 (-6.77)***	-0.0072 (-6.33)***
<i>GROWTH</i>	+	0.0270 (8.80)***	0.0274 (8.87)***	0.0237 (8.35)***
<i>ANI</i>	+	0.0001 (1.46)*	0.0001 (1.43)*	0.0001 (1.42)
<i>ZSCORE</i>	-	-0.0009 (-2.19)**	-0.0009 (-2.19)**	-0.0007 (-1.78)**
<i>LEVERAGE</i>	+	-0.0071 (-0.66)	-0.0083 (-0.77)	-0.0114 (-1.15)
F-value for Model		20.63***	18.85***	21.80***
Adjusted R ²		0.1638	0.1512	0.1557

TABLE 2 (Continued)

t-value is based on a one-tailed test. *, **, and *** indicate significance at the 10, 5, and 1 percent level, respectively, except intercept and *ACIND*TEN* (or *ACEFF*TEN*) where two-tailed tests are used.

Variable definitions:

|DACCR| = Absolute discretionary accruals.

ACIND = Audit committee independence, which is 1 if audit committee is solely composed of outside non-employee/non-gray directors and 0 otherwise.

ACEFF = Audit committee effectiveness, which is 1 if audit committee is solely composed of outside non-employee/non-gray directors and the committee meet at least twice during the sample year, and 0 otherwise.

AUDTEN = Auditor tenure, which is the number of years that an auditor remains with the same client firm.

*ACIND*TEN* = Interaction between *ACIND* and *AUDTEN*.

*ACEFF*TEN* = Interaction between *ACEFF* and *AUDTEN*.

AUDTYPE = Auditor type, which is 1 if Big 6, and 0 otherwise.

SIZE = Natural log of total assets.

GROWTH = Percentage change in total assets from the previous to the current year.

ΔNI = Percentage change in net income from the previous to the current year.

ZSCORE = Altman's (1983) Z-score.

LEVERAGE = Long term debt / Total assets.

Table 2, Column A, provides the results of the main regression using absolute discretionary accruals, *|DACCR|*, as the dependent variable. This variable is due to Francis *et al.* (1999) and Frankel *et al.* (2001), among others, who suggest that managers want discretion to use *both* income increasing and decreasing accruals and not just income increasing or income decreasing accruals.

ACIND is negative and statistically significant, indicating that, controlling for other effects, client managers of firms with independent audit committees exercise less accounting discretion, which supports Hypothesis 1. The coefficient on *AUDTEN* is negative and statistically significant at all conventional levels suggesting that firms with long-lasting auditors exercise less accounting discretion, which supports Hypothesis 2. The coefficient on *ACIND*TEN* is positively statistically significant at all conventional levels, which is consistent with the arguments that interaction between independent audit committees and long-lasting auditors, in fact, increases the accounting flexibility of managers. The positive impact of the interaction variable may also suggest that client managers could utilize some accounting discretion in a way to improve the ability of reported earnings to reflect fundamental value of the firm as a result of increased communication (Dye and Verrecchia 1995; Subramanyam 1996).

With regard to the *CNTRL* variables, the coefficients of firm size and Altman's (1983) Z-score (a proxy for financial risk) are negative and statistically significant. The coefficient of asset growth is positive and statistically significant. Consistent with the predictions, these results suggest that managers of small firms, growth firms, and firms experiencing high financial risk exercise greater accounting discretion. A change in net income variable is significant at ten percent level.

The coefficient on *AUDTYPE* is insignificant which is inconsistent with studies examining differences in discretionary accruals across *auditor type* (DeFond and Subramanyam 1998; Francis *et al.* 1999; among others), but is consistent with Frankel *et al.* (2001) where the *BIGFIVE* variable is positive and insignificant (see their Table 6). However, *AUDTYPE* is mainly used to control for variation in discretionary accruals across firms with different auditors in the sample. The main intent is not to test hypothesis with regard to *AUDTYPE*. Therefore, caution should be taken against drawing policy implications with regard to this variable.

Sensitivity Tests

Abbott and Parker (2000) employ the existence of employee directors on the committees and the number of meetings to define audit committee effectiveness. Consistent with Abbott and Parker (2000), audit committee

effectiveness (*ACEFF*) is defined as a composite measure, which is defined as a dummy variable that is coded 1 if all audit committee directors are independent and meet at least twice during the year and 0 otherwise. In addition, DeZoort (1997) finds that audit committee members perceive the review of internal control systems as the most important audit committee responsibilities. Treadway Commission (1987, Report of the National Commission on Fraudulent Financial Reporting), AICPA (1993, A Special Report by the Public Oversight Board), and BRC (1999) also indicate that the audit committee members' awareness and acceptance of their responsibilities improve audit committee effectiveness. They suggest that reviewing financial statements and internal controls be among the most important responsibilities performed by audit committee. Thus, several composite variables of audit committee characteristics mentioned above are also examined for sensitivity tests. While these composite variables do not provide an incremental explanatory power, the results are qualitatively the same as those with audit committee independence (see Table 2, Column B).¹¹ Motivated by Beasley (1996) and Carcello and Neal (2000), audit committee independence based on the percentage of outside directors on the audit committee is also examined, which provides similar results.

Motivated by concerns about the high correlation between *ACIND/AUDTEN* and their interaction, models without the interaction term are also examined. Dropping of the interaction variable does not change empirical implications of *ACIND* and *AUDTEN* (see Table 2, Column C). Using Variance Influence Factors (VIF, cutoff value=10) and Condition Index (CI, cutoff value=30) to check for multicollinearity among the explanatory variables, no significant multicollinearity problems affecting the models were found (the highest VIF=5.15 and CI=13.74).


The possibility that the results of this study are affected by the choice of the proxy for auditor type is investigated. Instead of a dummy variable representing Big 6 versus Non-Big 6, an auditor specialization measure is selected which is motivated by research showing that auditors with industry expertise provide their auditees with superior services and higher quality audits (Abbott and Parker 2000; DeFond *et al.* 2000; Craswell *et al.* 1995). To examine the effect of industry specialization, dichotomous measures of industry specialization for Big 6 firms are computed using the proportion of client firms' sales revenue in an industry in a year. This proportion is computed using Compustat's research and active data, consisting of 20,941 firms.¹² Because results using the above industry specialization measures are qualitatively similar only results using the dichotomous variable representing Big 6 versus Non-Big 6 are reported.

Conclusion

This study examines the role of audit committee independence and auditor tenure on client managers' accounting discretion. In addition, the impact of the interaction between an independent audit committee and a long lasting auditor on the managers' accounting discretion is examined. Accounting discretion is measured using discretionary accruals with their absolute values proxying for reporting flexibility. The results show that independent audit committees lower managers' accounting discretion. This finding is consistent with suggestions from prior studies (Abbott and Parker 2000; Carcello and Neal 2000; Wild 1996), indicating independent audit committees enhance corporate governance. Also, the results indicate that as auditor tenure increases, managers' accounting discretion decreases. This supports the belief that auditors with long lasting tenure provide higher quality assurance services instead of lowering their quality due to possible economic bonds with their client managers. In addition, this study provides evidence that interaction between independent audit committees and external auditors having long-term relationships increase the managers' reporting flexibility, which is consistent with Dye and Verrecchia (1995) and Subramanyam (1996) who argue that accounting discretion is positively associated with communication.

This study provides investors, regulators, and other financial information users with an understanding of the role audit committee independence, auditor tenure, and their interaction have on client managers' accounting discretion. This study provides relevant information regarding the question of requiring mandatory auditor rotation. In addition, this also contributes to the corporate governance venue by underpinning the recommendation No. 8 and principles 1 and 3 of the BRC (1999) that aim to promote communication between the external auditor and the audit committees about the quality of the firm's accounting practices as it applies to financial reporting.

Suggestions for Future Research

Future research may expand the sample to other industries, employ more sophisticated statistical approaches, and examine more details of audit committee characteristics in addition to the independence as measured by the presence of employees/gray directors on the audit committees. Other characteristics of audit committees that are not considered in this study may also be important in determining the effectiveness of audit committees. Future corporate governance studies may consider interactions between various external auditor characteristics and internal governance structures and their functional variations such as non-linearity. 

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Endnotes

1. These topics include the effect of controversial accounting policies, accounting estimates, significant audit adjustments, selection or change in significant accounting policies, accounting for significant unusual transactions, disagreements with management on significant accounting and auditing matters, and difficulties dealing with management when conducting the audit, etc. (SAS No. 61). SAS No. 90 requires an auditor to discuss certain information relating to the auditor's judgments about the quality, not just the acceptability, of the company's accounting principles with the audit committees of SEC clients.
2. The AICPA also points out that the costs of an audit will increase because significant start up costs will be incurred when auditors are required to change their clients frequently.
3. The goal-congruence organizational commitment theory of organizational behavior (see pages 191-195 of Greenberg and Baron 1997) states that the degree of agreement between two contracting parties' goals is positively associated with the desire to continue their contract.
4. Implicit assumption of this assertion is that audit committee composition is constant across the sample period. This assumption would be supported by Abbott and Parker (2001) who find very little time-series changes in the composition of audit committees across a nine-year period of 1991 through 1999 (see their page 153).
5. Using all firms on Compustat, for each year and two-digit SIC code I estimate the following model to obtain parameters a_1 , a_2 and a_3 : $TA_i = a_1 (1/A_{i,t-1}) + a_2 (\Delta REV_i) + a_3 PPE_i + \varepsilon_i$, where ΔREV is the revenues in year t less revenues in year t-1 scaled by total assets at t-1, PPE is the gross property plant and equipment in year t scaled by total assets at t-1 and ε is the residual of the regression. I require that there be at least 15 observations (firms) in each industry-year regression. All other procedures are the same as described in Dechow *et al.* (1995).
6. A gray director includes a former officer or employee of the firm or a related entity, a family member of an executive officer or a person having a business relationship with the firm in some manner such as former/current consultant or attorney of the company while an employee director includes a current employee/executive of the company.
7. The square root of the issuances of debt and equity was also considered as a control variable since prior research has found that before securities offerings, managers have incentives to use income increasing discretionary accruals (Rangan 1998; Teoh *et al.* 1998). However, it always carries insignificant value and is highly correlated with *SIZE* ($\rho=0.71$) and therefore was subsequently dropped from the model. Inclusion of the variable does not change the conclusions.
8. Abbott and Parker (2000) indicate firms with two-digit codes 40-44, 46, 48-49, and 60-69 (regulated utilities and financial institutions) should be excluded from the sample because of the unique aspects of their regulatory environments.
9. We examined the Pearson correlation matrix (not reported), which shows that there are generally no large correlations between the variables. Exceptions are the correlation between the two governance variables (i.e., *ACIND* and *AUDTEN*) and their interaction ($\rho=0.42$ and $\rho=0.58$), which will be addressed later in the paper.
10. The mean tenure is used as a cutoff value. Median, 5 and 10 year cutoff values also provide qualitatively similar results.

11. Menon and Williams (1994) argue that while there is some information conveyed by the number of meetings, the frequency of meetings may not indicate the effectiveness of audit committee in achieving financial reporting integrity nor provide any indication of the work accomplished during the meetings.
12. Two dichotomous measures were examined. The first measure is based on Palmrose (1986). An industry specialist is defined as an auditor with the greatest market share or one with market share exceeding 15 percent within a two-digit SIC industry code. The second measure follows Abbott and Parker (2000) and Franz *et al.* (1998) who classify two-digit SIC code industries into 12 focus industries and define an industry specialist as one with the greatest market share or one with market share exceeding 15 percent within that grouping. Continuous measures of auditors' industry market share were also used and the results were similar.

References

1. Abbott, L. and S. Parker, "Audit Committee Characteristics and Auditor Selection," *Auditing: A Journal of Practice and Theory*, Vol. 19, Fall, pp. 47-66, 2000.
2. Abbott, L. and S. Parker, "Audit Committee Characteristics and Auditor Switches," *Research in Accounting Regulation*, Vol. 15, pp. 151-166, 2001.
3. Abbott, L. and S. Parker, G. Peters, and K. Raghunandan, "The Impact of Audit Committee Characteristics on the Relative Magnitude of Non-Audit Service Purchases," Working paper, University of Memphis, 2001a.
4. Abbott, L. and S. Parker, G. Peters, and K. Raghunandan, "The Effect of Audit Committee Characteristics and Non-Audit Fees on Audit Fees", Working paper, University of Memphis, 2001b.
5. Altman, E., *Corporate Financial Distress: A Complete Guide to Predicting, Avoiding, and Dealing with Bankruptcy*, John Wiley & Sons, New York, NY, 1983.
6. American Institute of Certified Public Accounts (AICPA), SEC practice section: Statement of position regarding mandatory rotation of audit firms of publicly held companies. New York, NY: AICPA, 1992.
7. Barth, M., J. Elliott, and M. Finn, "Market Rewards Associated With Patterns of Increasing Earnings," *Journal of Accounting Research*, Vol. 37, Autumn, pp. 387-413, 1999.
8. Bartov, E., F. Gul., and Tsui, J., "Discretionary Accruals Models and Audit Qualifications," *Journal of Accounting and Economics*, Vol. 30, December, pp. 421-452, 2001.
9. Beasley, M., "An Empirical Analysis of the Relation Between the Board of Director Composition and Financial Statement Fraud," *The Accounting Review*, Vol. 71, October, pp. 443- 465, 1996.
10. Beasley, M., J. Carcello, and D. Hermanson, *Fraudulent Financial Reporting: 1987-1997 An Analysis of U.S. Public Companies*, Committee of Sponsoring Organizations of the Treadway Commission. Jersey City, NJ, 1999.
11. Beck, P., T. Frecka, and I. Solomon, "A Model of the Market for MAS and Audit Services: Knowledge Spillovers and Auditor-Auditee Bonding," *Journal of Accounting Literature*, Vol. 7, pp. 50-64, 1988.
12. Blue Ribbon Committee (BRC) on Improving the Effectiveness of Corporate Audit Committees, *Report and Recommendations of the Blue Ribbon Committee on Improving the Effectiveness of Corporate Audit Committees*, NYSE and NASD, 1999.
13. Bowen, R., E. Noreen, and J. Lacey, "Determinants of the Corporate Decision to Capitalize Interest," *Journal of Accounting and Economics*, Vol. 3 No. 2, August, pp. 151-179, 1981.
14. Carcello, J., and T. Neal, "Audit Committee Composition and Auditor Reporting", *The Accounting Review*, Vol. 75, October, pp. 453-467, 2000.
15. Craswell, A., J. Francis, and S. Taylor, "Auditor Brand Name Reputations and Industry Specializations," *Journal of Accounting and Economics*, Vol. 20, December, pp. 297-322, 1995.
16. DeAngelo, L., "Auditor Size and Quality," *Journal of Accounting and Economics*, Vol. 3, December, pp. 183-199, 1981.
17. DeAngelo, H., and L. DeAngelo, "Accounting Choices in Troubled Companies," *Journal of Accounting and Economics*, Vol. 17, January, pp. 113-143, 1994.
18. Dechow, P. and D. Skinner, "Earnings Management: Reconciling the Views of Accounting Academics, Practitioners, and Regulators," Working paper, University of Michigan, 2000.

19. Dechow, P., R., Sloan, and A. Sweeney, "Detecting Earnings Management," *The Accounting Review*, Vol. 70, April, pp. 193-225, 1995.
20. Dechow, P., R., Sloan, and A. Sweeney, "Causes and Consequences of Earnings Manipulation: An Analysis of Firms Subject to Enforcement Actions by the SEC," *Contemporary Accounting Research*, Vol. 13, pp. 1-36, 1996.
21. DeFond, M., and K. Subramanyam, "Auditor Changes and Discretionary Accruals," *Journal of Accounting and Economics*, Vol. 25, February, pp. 35-67, 1998.
22. DeFond, M., and J. Jiambalvo, "Incidence and Circumstances of Accounting Errors," *The Accounting Review*, Vol. 66, July, pp. 643-655, 1991.
23. DeFond, M., and J. Jiambalvo, "Factors Related to Auditor-Client Disagreements Over Income-Increasing Accounting Methods," *Contemporary Accounting Research*, Vol. 9, Spring, pp. 415-431, 1993.
24. DeFond, M., and J. Jiambalvo, "Debt Covenant Violation and Manipulation of Accruals," *Journal of Accounting and Economics*, Vol. 17, No. ½, January, pp. 145-176, 1994.
25. DeFond, M., and C. Park, "Smoothing Income in Anticipation of Future Earnings," *Journal of Accounting and Economics*, Vol. 23, pp. 115-140, 1997.
26. DeFond, M., and J. Francis, and T. Wong, "Auditor Industry Specialization and Market Segmentation: Evidence from Hong Kong," *Auditing: A Journal of Practice & Theory*, Vol. 19, Spring, pp. 49-66, 2000.
27. DeGeorge, F., J. Patel, and R. Zeckhauser, "Earnings Management to Exceed Thresholds," *Journal of Business*, Vol. 72, pp. 1-33, 1999.
28. Deis, D., and G. Giroux, "Determinants of Audit Quality in the Public Sector," *The Accounting Review*, July, pp. 462-479, 1992.
29. DeZoort, F., "An investigation of Audit Committees' Oversight Responsibilities," *Abacus*, Vol. 33. No. 2, pp. 208-227, 1997.
30. Dhaliwal, D., G. Salamon, and E. Smith, "The Effect of Owner Versus Management Control on the Choice of Accounting Methods," *Journal of Accounting and Economics*, Vol. 4, July, pp. 41-53, 1982.
31. Dye, R., and R. Verrecchia, "Discretion vs. Uniformity: Choices Among GAAP," *The Accounting Review*, Vol. 70, pp. 389-416, 1995.
32. Francis, J., E. Maydew, and H. Sparks, "The Role of Big 6 Auditors in the Credible Reporting of Accruals," *Auditing: A Journal of Practice & Theory*, Vol. 18, Fall, pp. 17-34, 1999.
33. Frankel, R., M. Johnson, and K. Nelson, "Auditor Independence and Earnings Quality," Working paper, MIT, 2001.
34. Franz, D., D. Crawford, and E. Johnson, "The Impact of Litigation Against an Audit Firm on the Market Value of Nonlitigating Clients," *Journal of Accounting, Auditing & Finance*, Vol. 13, Spring, pp. 117-134, 1998.
35. Geiger, M., and K. Raghunandan, "Auditor Tenure and Audit Reporting Failures," *Auditing: A Journal of Practice & Theory*, Vol. 21, March, pp. 67-78, 2002.
36. Greenberg, J., and R. Baron, *Behavior in Organizations*. Prentice Hall, Upper Saddle River, NJ, 1997
37. Healy, P., and K. Palepu, "The Effectiveness of Accounting-Based Dividend Constraints," *Journal of Accounting and Economics*, Vol. 12, January, pp. 97-123, 1990.
38. Knapp, M., "Factors that Audit Committee Members Use as Surrogates for Audit Quality," *Auditing: A Journal of Practice & Theory*, Vol. 10, No. 1, Spring, pp. 35 – 52, 1991.
39. Lang, M., and R. Lundholm, "Cross-Sectional Determinants of Analyst Ratings of Corporate Disclosures," *Journal of Accounting Research*, Vol. 31, Autumn, pp. 246-271, 1993.
40. McMullen, D., "Audit Committee Performance: An Investigation of the Consequences Associated with Audit Committees," *Auditing: A Journal of Practice & Theory*, Vol. 15, Spring, pp. 87-103, 1996.
41. Meixner, W., and R. Welker, "Judgment Consensus and Auditor Experience," *The Accounting Review*, Vol. 63, No. 3, July, pp. 505-513, 1988.
42. Menon, K., and J. Williams, "The Use of Audit Committees for Monitoring," *Journal of Accounting and Public Policy*, Vol. 13, pp. 121-139, 1994.
43. Palmrose, Z., "Audit Fees and Auditor Size," *Journal of Accounting Research*, Vol. 24, pp. 97-110, 1986.
44. Rangan, S., "Earnings Management and the Performance of Seasoned Equity Offerings," *Journal of Financial Economics*, Vol. 50, pp. 101-122, 1998.
45. Romney, M., and P. Steinbart, *Accounting Information Systems*, Prentice-Hall, Englewood Cliffs, NJ, 1999.

46. Scarbrough, P., D. Rama, and D. Raghunandan, "Audit Committee Composition and Interaction with Internal Auditing: Canadian Evidence," *Accounting Horizons*, Vol. 12, March, pp. 51-62, 1998.
47. St. Pierre, K., and J. Anderson, "An Analysis of the Factors Associated with Lawsuits Against Public Accountants," *The Accounting Review*, Vol. 59, April, pp. 242-263, 1984.
48. Subramanyam, K., "The Pricing of Discretionary Accruals," *Journal of Accounting and Economics*, Vol. 22, pp. 249-281, 1996.
49. Teoh, S., I. Welch, and T. Wong, "Earnings Management and the Underperformance of Seasoned Equity Offerings," *Journal of Financial Economics*, Vol. 50, pp. 63-99, 1998.
50. Turner, L. <http://www.sec.gov/news/extra/aaacall.htm>, 1999.
51. Verschoor, C., "Benchmarking the Audit Committee," *Journal of Accountancy*, September, pp. 59-64, 1993.
52. Watts, R., and J. Zimmerman, *Positive Accounting Theory*, Prentice-Hall, Englewood Cliffs, NJ, 1986
53. Watts, R., and J. Zimmerman, "Positive Accounting Theory: A Ten Year Perspective," *The Accounting Review*, Vol. 65, January, pp. 131-156, 1990.
54. Wild, J., "The Audit Committee and Earnings Quality," *Journal of Accounting, Auditing, and Finance*, Vol. 11, Spring, pp. 247-276, 1996.

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