AN EMPIRICAL ANALYSIS OF THE EFFECT OF AUDIT QUALITY ON FINANCIAL REPORTING FRAUD

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Abstract

Several highly publicized financial reporting fraud cases (e.g., Enron, Tyco International, and WorldCom) have put the role of external auditors and quality of their audit in ensuring corporate financial reporting quality under considerable scrutiny. Much research has been conducted on the determinants of earnings management. Since earnings management is inherently unobservable, most studies use various measures of accruals as proxies for earnings management. This study examines the relationship between audit quality and a more direct measure of earnings management – financial reporting fraud. Contrary to the concerns that nonaudit services are the primary reason for auditor independence impairment that results in lower audit and earnings quality, this study finds no significant relationship between reporting fraud and fees paid to auditors for various services.

Keywords: AAER, Earnings Management, Earnings Quality, Fraud, Audit Quality, Auditor Fees

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1. Introduction

The role of external audit in ensuring the quality of corporate earnings has come under considerable scrutiny due to several highly publicized financial reporting fraud cases (e.g., Enron, Tyco International, and WorldCom). Since values of the firms as well as many contractual provisions are linked to reported earnings figures, it creates economic incentives for management to engage in earnings management. Former Securities and Exchange Commission (SEC) Chairman Arthur Levitt (1998) expressed his serious concerns over earnings management in his famous "the Numbers Game" speech. He called for a fundamental cultural change for management and the accounting profession.

To address the issue, SEC requires publicly-held firms to disclose the amounts of fees that they paid their external auditors for audit and non-audit services in proxy statements filed on or after February 5, 2001. Such disclosures are expected to provide investors with information about quality of independent audit of corporate annual financial statements in the U.S.

Several studies have examined the SEC's proposition that fees paid by companies to their independent auditors may impair auditor independence, resulting in lower audit quality and, in turn, lower reported earnings quality (e.g., Ashbaugh et al., 2003; Frankel et al., 2002). The concern is that large fees, especially for non-audit services, create too close a financial relationship between the auditor and audit client, which makes the auditor more reluctant in challenging questionable accounting practices by the client's management.

Since earnings management is the result of managerial judgment and is inherently unobservable, various definitions of earnings management have been proposed. Schipper (1989, p.92) appears to have captured the essence of earnings management by defining it as "... purposeful intervention in the external financial reporting process with the intent of obtaining private gain ..." Likewise, Healy and Wahlen (1999, p.368) state that "earnings management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some

stakeholders the underlying about economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers." Regardless of its different definitions, earnings management is inherently unobservable; thus, most studies use various measures of discretionary (abnormal) accruals as proxies for earnings management (e.g., Ashbaugh et al., 2003; Dechow et al., 1995; Frankel et al., 2002). Discretionary accruals require assumptions and estimates of non-discretionary portion of the total reliability of estimated accruals. Therefore, discretionary accruals as measure of earnings management decreases in the magnitude of estimation errors (Dechow and Dichev, 2002). Similarly, Guay et al. (1996) show that accruals derived from alternative estimation models involves considerable imprecision. Bernard and Skinner (1996) present similar argument that abnormal accruals derived using the Jones-type models reflect measurement errors partly because of the misclassification of normal as abnormal accruals.

Using data collected from proxy statements, this study examines the relationship between audit quality (proxy by various measures of auditor fees) and a more direct measure of earnings management financial reporting fraud. Financial reporting fraud can be thought of as the ultimate manifestation of aggressive earnings management. Cases of financial reporting fraud are the results of the U.S. Securities and Exchange Commission's (SEC) accountingrelated enforcement actions and are made public in the SEC's Accounting and Auditing Enforcement Releases (AAERs). The AAERs describe the SEC's investigations of alleged violations of accounting provisions of the securities laws, including fraud, nonfraudulent but reckless disclosure, and accounting disputes that allege neither fraud nor recklessness (Feroz et al., 1991). Prior studies have examined the and financial characteristics, operating motivations of management, or the effectiveness (or the lack of) of corporate governance of the firms cited in the AAERs for aggressive or fraudulent financial reporting practices (e.g., Beasley et al., 2000; Beneish, 1999; Bonner et al., 1998; Dechow et al., 1996; Farber, 2005; Leng et al., 2011). Some studies investigate stock price reactions to the news of firms being investigated by the SEC for alleged cases of financial reporting fraud or misconduct (Feroz et al., 1991; Leng et al., 2011; Nourayi, 1994). However, there is little empirical evidence on the relationship between audit quality and financial reporting fraud. This study contributes to the literature by providing empirical evidence on this important issue.

Contrary to the concerns of many in accounting practice and research, this study finds no statistically significant relationship between financial reporting fraud and fees paid to independent auditors for audit services and non-audit services, respectively, for all services combined, or for fees for non-audit services relative to fees for audit services. This finding does

not support the claim that non-audit fees paid to the auditor are the primary reason for auditor independence impairment that results in lower audit and earnings quality.

The rest of the paper is organized as follows. The next section reviews prior research on earnings management and develops research hypotheses. Section 3 describes research methodology. Section 4 discusses the empirical results. The final section summarizes the paper and proves concluding remarks.

2. Prior Research and Hypotheses

Several studies have investigated the determinants and consequences of financial report fraud. Occurrence of fraud appears to be associated with the financial and operating characteristics, motivations of management, negative long-term performance, or effectiveness (or the lack of) of corporate governance of the firms cited in the AAERs for fraudulent or reckless financial reporting practices (e.g., Beasley et al., 2000; Beneish, 1999; Dechow et al., 1996; Farber, 2005; Leng et al., 2011). Also, certain types of financial reporting fraud are more likely to result in auditor litigations (Bonner et al., 1998). Other studies have documented negative stock price reactions up to two to three years prior to the news of firms being investigated by the SEC for alleged cases of financial reporting fraud or misconduct (Feroz et al., 1991; Leng et al., 2011; Nourayi, 1994). In addition, Feroz et al. (2007) find that firms cited in the AAERs have lower earnings response coefficients (i.e., the magnitude of stock price reactions to earnings) for the periods after being cited for fraud compared to those for the periods before being cited for fraud in the AAERs. Also, AAER firms have lower earnings response coefficients than those control firms not cited in the AAERs during the periods before and after being cited for fraud. Furthermore, Johnson et al. (2009) present evidence that the AAER firms earn zero stock returns over the fraud period, and their stock prices decline an average of 23 percent around the first disclosure of potential fraud. The findings suggest that the stock market penalizes those firms charged by the SEC for aggressive or fraudulent financial reporting practices. However, there is little empirical evidence about the relationship between audit quality and financial reporting fraud.

Given the increasing occurrences of earnings management in general and financial reporting fraud in particular, some critics of the accounting profession have argued that non-audit services provided by independent auditors to their audit clients impair auditor independence and are the primary factor contributing to poor quality of audit and, thus, reported earnings. Some recent studies have addressed this issue of auditor independence and earning quality with mixed results. For example, Frankel et al. (2002) propose that a greater economic bond between the audit firm and client will impair auditor

independence. Impaired auditor independence makes the auditor less willing to resist client's biases in reported earnings. As a result, earnings quality is lower. Measuring the economic bond as the relative importance of non-audit fees disclosed in the proxy statements, Frankel et al. (2002) report that the ratio of non-audit fees to total fees is positively associated with small earnings surprises and with the magnitude of discretionary accruals (proxies for earnings quality or earnings management).

However, Chung and Kallapur (2003) argue that the non-audit fees ratio cannot fully reflect the degree of economic dependence, and they find no significant relationship between discretionary accruals and audit fees or non-audit fees. Additionally, Ashbaugh et al. (2003) argue that auditors do not necessarily compromise their independence when clients pay high non-audit fees, with their findings of no association between the non-audit fees ratio and incomeincreasing discretionary accruals. Kinney et al. (2004) also fail to find an association between non-audit fees and the incidence of restatements as well. Contrary to the concerns of higher auditor fees impairing audit and earnings quality, Antle et al. (2006) apply a simultaneous equations model to test the confluence of audit fees, non-audit fees and abnormal accruals and document that knowledge spillovers from nonaudit services actually lead to a negative association between non-audit fees and abnormal accruals (i.e., non-audit services resulting in less, not more, earnings management). Other criticism directed towards the Frankel et al.'s (2002) study is that the authors do not consider whether higher audit fees and total fees may also increase the economic bond, which impairs auditor independence with lower earnings quality as a consequence (Kinney and Libby, 2002). We examine this issue in this study

Similarly, Raghunandan et al. (2003) find no evidence supporting the claim that non-audit fees or total fees inappropriately influence the audit of financial statements that are subsequently restated. Their study reports no significant differences between the restatement and control firms in unexpected or actual (as disclosed in proxy statements) non-audit fees, total fees, or ratio of non-audit to total fees. However, like Frankel at al. (2002) and many others, the authors also fail to consider the association between audit fees and earning quality. Likewise, focusing on audit opinions (instead of discretionary accruals), DeFond et al. (2002) report no significant association between auditors' going concern opinions

and non-audit fees, audit fees, total auditor's fees, or fee ratio.

One reason for the mixed results in prior studies is that some focus on non-audit services and fail to consider that higher auditor fees, regardless for audit or non-audit services, will strengthen economic bond of the auditor to the client, resulting in auditor independence impairment and, thus, poor quality of reported earnings. Indeed, in the legal action against KPMG in the audit of Xerox Corporation, the SEC contends that total fees are a material inducement for the auditor to permit Xerox's management to manipulate earnings to meet the performance expectations of Wall Street (SEC 2003). To further examine the relationship between auditors' fees and earnings quality (or the lack of) that results in the SEC's investigation of the firm for misleading or fraudulent financial reporting, this study tests the following hypotheses (stated in the null form):

H1: There is no significant association between audit fees and earnings quality.

H2: There is no significant association between non-audit fees and earnings quality.

H3: There is no significant association between total fees and earnings quality.

3. Research Methodology

3.1 Sample Selection

The initial sample consists of 69 AAER firms, identified from the SEC web site, that were alleged fraudulent or misleading financial reports affecting fiscal periods between 2000 and 2003. These firms are then screened for availability of requisite financial data on Compustat and data on fees paid to external auditors in proxy statements. The final AAER sample includes 21 firms, after deleting 29 firms due to incomplete financial data and 19 firms due to missing auditor fee data. We then match each AAER sample firm with a non-AAER firm based on two-digit SIC code and firm size. That results in a final sample of 42 firms. Fiscal year 2000 is the first year that publiclyheld companies are required by the SEC to disclose annual fees paid to external auditors for audit and non-audit services. This presents a first opportunity that allows the examination of the association between non-audit fees (and audit fees) and quality of reported earnings. Table 1 presents outcome of the selection process.

Table 1. Sample Selection

	Observations
Firms alleged fraudulent or misleading financial reports affecting fiscal periods between 2000	69
and 2003 identified from AAERs	
Financial data available from Research Insight (Compustat)	40
Auditor fee data available from the proxy statement	21
Final sample	AAER firms: 21
	Control firms*: 21

Note: * Control firms are matched based on two-digit SIC code and firm size (i.e., total assets.)

3.2 Model Specification

We estimate the following logistic regression model, where FRAUD equals "1" if the firm is cited in an AAER for alleged fraudulent or misleading financial

reports, and "0" otherwise. FEEVAR indicates the alternative measures of the auditor fee variables (including LNTLFEE, LNAUFEE, LNNONAU, and FEERATIO) and "ɛ" is the error term.

$$FRAUD = \beta_0 + \beta_1 FEEVAR + \beta_2 BIG_N + \beta_3 AUDTEN + \beta_4 CFO + \beta_5 ABSCFO + \beta_6 ACC + \beta_7 ABSACC + \beta_8 MKRTX + \beta_9 LOSS + \beta_{10} MKBKF + \beta_{11} LEVERG + \beta_{12} FINACQ + \beta_{13} LNMVE + \epsilon$$

$$(1)$$

Prior studies suggest that higher fees paid to the external auditor increase the economic bond between the auditor and the client and thus impair auditor independence. The impaired independence results in poor audit quality and allows for greater earnings management (resulting in lower earnings quality). This study uses auditor fees disclosed in proxy statements to develop three measures of the auditorclient economic bond. The first measure is the natural log transformation of total fees paid to auditors (LNTLFEE). This is consistent with the argument that the economic bond to a client is the total fees paid to the auditor, regardless of the nature of services (Kinney and Libby, 2002). This is also consistent with the SEC's position in recent enforcement actions against independent auditors (e.g., SEC, 2003).

The second and third measures are natural log transformations of fees for audit (LNAUFEE) and non-audit services (LNNONAU), respectively. These two measures are consistent with the argument that higher fees from either kind of services would presumably increase the economic bond (Kinney and Libby, 2002). These measures allow us to examine the respective relationships between earning management and audit and non-audit fees simultaneously.

The fourth measure is the ratio of non-audit fees to total fees (FEERATIO). This measure is the focus of many recent studies (Basioudis et al., 2011; Brandon et al., 2004; Firth, 2002) on auditor independence and earnings management. This measure is included to obtain empirical results for comparison with prior studies.

In addition to the four auditor fee measures, this study includes two variables as proxies for audit quality. Prior studies suggest that Big-N auditors are less likely to allow earnings management than non-Big-N auditors (e.g., Becker et al. 1998; Francis et al. 1999). The BIG_N variable, either then big-five audit firms (including Arthur Andersen in the test period) or now big-four, (BIG_N) is coded as "1" if the firm is audited by a Big-N auditor for the sample year, and "0" otherwise. Another variable is auditor tenure

(AUDTEN) measured as the number of years the same auditor has audited the client's financial statements. Some prior studies argue that auditor independence decreases as the length of auditor tenure increases (Beck et al., 1988; Lys and Watts, 1994). On the other hand, others claim that as auditor tenure increases, the auditor is better at assessing risk of material misstatements by gaining insights into the client's operations and business strategies (e.g., Arens et al., 2009).

This study also includes several variables that are frequently used in prior research to control for other factors influencing management's incentives to manage or manipulate reported earnings. Several measures of firm performance are reported to be correlated with earning management (or earnings quality) in prior studies (e.g., Dechow et al., 1995; Frankel et al., 2002; McNichols, 2000): cash flows from operations deflated by average total assets (CFO), the absolute value of cash flows from operations deflated by average total assets (ABSCFO), total accruals deflated by average total assets (ACC), the absolute value of total accruals deflated by average total assets (ABSACC), annual market returns (MKRTX), and an indicator variable (LOSS) equal to "1" if the firm reports a loss for fiscal year 2000, and "0" otherwise. In addition, Matsumoto (2002) suggests that firms with higher growth prospects are more likely to manage earnings. Growth prospects are measured by the market-tobook ratio (MKBKF). This study also includes leverage (LEVERG), measured as the ratio of total liabilities to total assets, and a financing indicator variable (FINACQ) equal to "1" if the firm issued equity or debt securities during the sample year, and "0" otherwise. Prior studies find leverage and need for external financing are related to earning management (Becker et al., 1998; DeAngelo et al., 1994). Finally, this study controls for firm size measured as the natural log transformation of market value of equity (LNMVE). The definitions of these variables are summarized in Table 2.

Table 2. Definitions of Variables

EDALID	As indicates with a self-with indicate and i
FRAUD	An indicator variable equal to "1" if the sample firm cited in an AAER, and "0" otherwise (the Dependent Variable);
FEEVAR:	
LNTLFEE	Natural logarithm of total fees paid to the auditor;
LNAUFEE	Natural logarithm of audit fees paid to the auditor;
LNNONAU	Natural logarithm of non-audit fees paid to the auditor;
FEERATIO	Ratio of non-audit fees relative to total fees paid to the auditor;
BIG5	An indicator variable equal to "1" if the auditor is a Big-5 firm, and "0" otherwise;
AUDTEN	Number of years the auditor has audited the firm=s financial statements;
CFO	Cash flows from operating activities, deflated by average total assets;
ABSCFO	Absolute value of cash flows from operating activities, deflated by average total assets;
ACC	Total accruals (i.e., net income minus cash flows from operating activities), deflated by average total assets;
ABSACC	Absolute value of total accruals (i.e., net income minus cash flows from operating activities), deflated by average total assets;
MKRTX	Annual market return of the firm=s common stock;
LOSS	An indicator variable equal to "1" if the firm reported loss for the fiscal year, and "0" otherwise;
MKBKF	Market value to book value for common equity to measure growth prospects;
LEVERG	Leverage ratio defined as ratio of total liabilities relative to total assets;
FINACQ	An indicator variable equal to "1" if the firm issued equity or debt securities during the fiscal year, and "0" otherwise;
LNMVE	Natural logarithm of market value of equity at year end.

4. EMPIRICAL RESULTS

4.1 Univariate Statistics: Correlations and T-Tests

Table 3 presents the mean values of each variable for the pooled (full) sample of 42 firms and sub- groups of AAER firms and control firms with 21 firms each. We also perform a t-test to examine the mean value difference for each variable between the two subgroups. Our results show no significant difference between these two groups in most variables, except that the length of audit tenure (AUDTEN) is shorter for AAER firms (t-statistic = -1.92 and p-value = 0.060) and the ratio of market-to-book value (MKBKF) is greater for AAER firms (t-statistic = 1.93 and p-value = 0.061).

Table 3. Descriptive and Univariate Statistics

	Full- Sample	Sub-Group			Mean Group		
	Mean				Difference		
Variables	(N=42)	Group	Mean	N		T-Statistics#	P-value
LNTLFEE	7.083	AAER	7.140	21	0.114	0.23	0.819
LNILIEE	7.003	Control	7.026	21	0.114		
LNAUFEE	6.144	AAER	6.194	21	0.099	0.26	0.796
	0.144	Control	6.095	21	0.099		
LNNONAU	6.483	AAER	6.582	21	-0.198	0.33	0.743
	0.463	Control	6.384	21			
FEERATIO	0.537	AAER	0.544	21	0.015	0.19	0.850
	0.557	Control	0.529	21			
BIG_N	0.929	AAER	0.905	21	-0.047	-0.59	0.558
	0.929	Control	0.952	21			
AUDTEN	10.571	AAER	8.048	21	-5.047	-1.92	0.061*
	10.371	Control	13.095	21			
CFO	0.000	AAER	-0.009	21	-0.000	-0.01	0.992
	-0.009	Control	-0.009	21			
ABSCFO	0.157	AAER	0.132	21	-0.051	-0.82	0.416
	0.137	Control	0.183	21			

ACC	-0.262	AAER	-0.304	21	-0.085	-0.32	0.750
		Control	-0.219	21			
ABSACC	0.367	AAER	0.424	21	0.114	0.45	0.655
ABSACC		Control	0.310	21			
MKRTX	-0.026	AAER	-0.118	21	-0.185	-1.02	0.313
MIKKIA	-0.020	Control	0.067	21			
LOSS	0.405	AAER	0.381	21	-0.048	-0.31	0.758
LUSS		Control	0.429	21			
MKBKF	2.801	AAER	3.786	21	-2.970	1.93	0.060*
MKBKF		Control	0.816	21			
LEVERG	0.563	AAER	0.529	21	-0.067	-0.69	0.494
		Control	0.596	21			
FINACQ	0.952	AAER	1.000	21	-0.095	1.45	0.154
		Control	0.905	21			
LNMVE	6.202	AAER	6.607	21	0.810	1.01	0.318
		Control	5.797	21			

Notes:

- 1. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively, two-tailed.
- 2. # Test the means for the groups are significantly different from each other.
- 3. See Table 2 for variable definitions.

Table 4 reports the univariate Spearman's rank correlations and Pearson's correlations between AAER financial reporting fraud and the auditor fee variables. The results show no significant evidence to indicate that total fees, audit fees, or non-audit fee is related to the incidence of fraudulent financial statements (FRAUD). Overall, our univariate results suggest that the provision of audit and/or non-audit services does not seem to associate with the

occurrence of financial reporting fraud. However, this evidence on the relationships between fraud occurrence and auditor fee variables is obtained without controlling for other factors related to the characteristics of the auditor and the firm that may affect the occurrence of financial reporting fraud. To control for these factors, the multivariate logistic regressions are applied with results discussed next.

Table 4. Correlations between Fraud and Other Fee Variables

	FRAUD	LNTLFEE	LNAUFEE	LNNONAU	FEERATIO
FRAUD	1.000	0.037	0.041	0.053	0.029
LNTLFEE	0.049	1.000	0.927***	0.956***	0.628***
LNAUFEE	0.018	0.933***	1.000	0.804***	0.322**
LNNONAU	0.022	0.956***	0.828***	1.000	0.766***
FEERATIO	0.004	0.632***	0.364**	0.751***	1.000

Notes

- 1. Pearson's Correlations present in upper right and Spearman's Rank Correlations in lower left.
- 2. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively, one-tailed.
- 3. See Table 2 for variable definitions.

4.2 Results of Multivariate Logistic Regressions

Following DeFond et al. (2002) and Frankel et al. (2002), we perform similar multivariate tests as specified in model (1) discussed earlier. Table 5 reports the results from three separate logistic regressions of total auditor fees, audit and non-audit fees, and ratio of non-audit fees to total fees, respectively, on earnings quality as proxy by AAER financial reporting fraud for the full sample. The first logistic regression results are based on total auditor fees. As presented in Table 5, we find no significant

association between total fees paid to the auditors and the occurrence of financial reporting fraud (chi-square value is 0.001). The result is in contrast to the arguments by Frankel et al. (2002) and Larcker and Richardson (2004) that higher total fees paid to the auditor (regardless of types of services) strengthen the economic bond between the auditor and the client, which in turn impairs auditor independence resulting in lower audit quality and, thus, earning quality. Based on our finding, the amount of total fees paid to auditors may not compromise the auditor independence and audit quality.

Table 5. Summary Statistics from Logistic Regression

Variable	Dependent Variable:					
	FRAUD = 1, if an AAER firm; FRAUD = 0, otherwise.					
	Coefficient	Coefficient	Coefficient			
	(Chi-square)	(Chi-square)	(Chi-square)			
Intercept	-10.959 (0.001)	-15.139 (0.001)	-10.084 (0.001)			
LNTLFEE	0.017 (0.001)	N/A	N/A			
LNAUFEE	N/A	0.674 (0.581)	N/A			
LNNONAU	N/A	-0.400 (0.549)	N/A			
FEERATIO	N/A	N/A	-1.759 (0.528)			
BIG_N	-1.478 (0.632)	2.380 (0.241)	-0.956 (0.233)			
AUDTEN	-0.275 (4.908)**	-0.262(5.362)**	-0.279 (5.635)**			
CFO	-4.543 (1.136)	-2.949 (0.380)	-5.202 (1.435)			
ABSCFO	-5.884 (1.113)	-5.570 (1.002)	-6.227 (1.206)			
ACC	4.362 (0.373)	4.758 (0.493)	4.691 (0.501)			
ABSACC	4.438 (0.385)	4.601 (0.473)	4.699 (0.494)			
MKRTX	-0.565 (0.457)	-0.866 (1.060)	-0.720 (0.743)			
LOSS	-0.740 (0.281)	-0.688 (0.209)	-0.941 (0.432)			
MKBKF	0.371 (1.489)	0.305 (1.459)	0.319 (1.222)			
LEVERG	2.116 (0.614)	1.320 (0.227)	1.544 (0.310)			
FINACQ	11.169 (0.001)	11.201 (0.001)	10.547 (0.001)			
LNMVE	0.450 (0.871)	0.342 (0.477)	0.591 (1.718)			

Notes:

- 1. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively, one-tailed.
- 2. See Table 2 for variable definitions.

Prior studies often fail to consider the relationship between audit fees and earnings quality (e.g., Raghunandan et al., 2003). Thus, the second logistic regression model includes variables based on separate fees for audit and non-audit services. The results in Table 5 suggest that neither audit fees nor non-audit fees is significantly associated with incidence of financial reporting fraud (chi-square values are 0.581 and 0.549, respectively). The finding of no significant association between audit fees and fraudulent statements contradicts the argument that higher fees of either kind (audit or non-audit) would possibly weaken auditor independence and, thus, lower quality of audit and reported earnings. Also, the insignificant relationship between non-audit fees and fraudulent statements appears to be inconsistent with the study results by Frankel et al. (2002), Duh et al. (2009), and much of the comments on the negative effect of non-audit services on audit quality in the press. Our finding of the lack of a significant association between financial reporting fraud and non-audit fees, however, is consistent with the results reported in many other extant studies (e.g., Chung and Kallapur, 2003; Kinney et al., 2004; Raghunandan et al., 2003).

The third logistic regression results are based on the ratio of non-audit fees to total fees. As shown in Table 5, no significant association is found between this fee ratio and financial reporting fraud cited in AAER. The finding is similar to our results from the other two regressions as discussed above. This finding is also consistent with research results in Chung and Kallapur (2003), Kinney et al., (2004), and

Raghunandan et al. (2003). However, it is noted that auditor tenure, as presented in Table 5, is significantly and negatively (at the 5% level) related to the occurrence of fraudulent financial reporting in all three regressions. This result is consistent with the significantly shorter auditor tenure found for AAER fraud firms, as compared to that for non-AAER fraud firms, from our t-test results discussed above. This finding supports the argument of auditor's "learning curve effect," where as the auditor's tenure increases, the auditor's ability to assess misstatement risk and detect fraud increases (Carcello and Nagy, 2004; Fairchild, 2008). It may also provide some explanation for the mixed findings on fraud risk factors in prior studies that fail to control for auditor tenure.

5. Summary and Conclusions

This study examines the association between earnings quality (or the lack of), proxy by financial reporting fraud cited in SEC's AAERs, and audit quality, proxy by auditor fee measures: total fees, audit fees, and non-audit fees. Some prior studies (e.g., Frankel et al., 2002 and Larcker and Richardson, 2004), suggest that higher total fees paid to the auditor strengthen economic bond of the auditor-client relationship, which compromises auditor independence and make the auditor less willing to resist client's biases in reported earnings. Our study contributes to extant research by considering the relationship between alternative auditor fee measures and earning quality. Contrary to the concerns of many in accounting

practice or research, this study, however, does not find statistically significant relationships between AAER financial reporting fraud and (1) fees paid to independent auditors for audit services and non-audit services, respectively, (2) fees for all audit services combined, or (3) fees for non-audit services relative to fees for audit services. These findings are consistent with the evidence in Ashbaugh et al. (2003), Chung and Kallapur (2003), DeFond et al. (2002), Kinney et al. (2004), and Raghunandan et al. (2003) that no significant association exists between non-audit fee ratio and quality of audit or the client's reporting quality (as measured by abnormal accruals, going concern opinions, and restatements). The study also contributes to this stream of research by examining the effect of auditor fees on clear-cut cases of the lack of earnings quality - fraudulent financial reporting. Overall, our findings do not provide evidence for the economic bond between the auditor and the client because of fees paid by the client to their auditor that leads to lower audit and earnings quality. In particular, our findings also do not support the claim that fees for non-audit services are the primary reason for auditor independence impairment that results in lower audit quality and earnings quality, which is used as argument to support restrictions on nonaudit services that auditors may provide to their audit clients.

One limitation of this study is that it uses the first few years of disclosed fees paid to external auditors. Data from later years might provide additional insights. In addition, this study makes no distinction among different components of non-audit fees because of insufficient number of sample firms reporting such data. We suggest that future research may examine the effect of different components of non-audit fees on reported earnings quality to provide some insights into this important issue.

References

- Antle, R., E. Gordon, G. Narayanamoorthy, and L. Zhou. 2006. The Joint Determination of Audit Fees, Non-Audit Fees, and Abnormal Accruals. *Review of Quantitative Finance and Accounting* 2(3), 235-266.
- Arens, A., R. Elder, and M. Beasley. 2009. Auditing and Assurance Services: An Integrated Approach. 13th edition. N.J.: Prentice Hall.
- Ashbaugh, H., R. LaFond, and B. Mayhew. 2003. Do Nonaudit Services Compromise Auditor Independence? Further Evidence. *The Accounting Review* 78 (July), 611-639.
- Basioudis, I. G., F.A. Gul, and A. C. Ng. 2011. Non-Audit Fees, Auditor Tenure, and Auditor Independence. Working paper. University of Aston and Hong Kong Polytechnic University.
- Beck, P., T. Frecka, and I. Solomon. 1988. An Empirical Analysis of the Relationship between MAS Involvement and Auditor Tenure: Implications for Auditor Independence. *Journal of Accounting Literature* 7, 65-84.
- Becker, C.L., M.L. DeFond, J. Jiambalvo, and K.R. Subramanyam. 1998. The Effect of Audit Quality on

- Earnings Management. Contemporary Accounting Research 15, 1-24.
- Beasley, M.S., J.V. Carcello, D.R. Hermanson, and P.D. Lapides. 2000. Fraudulent Financial Reporting: Consideration of Industry Traits and Corporate Governance Mechanisms. Accounting Horizons 14 (December), 441-454.
- 8. Beneish, M.D. 1999. Incentives and Penalties related to Earnings Overstatements that Violate GAAP. *The Accounting Review* 74 (October), 425-457.
- Bernard, V., and D. Skinner. 1996. What Motivates Managers' Choice of Discretionary Accruals? *Journal* of Accounting and Economics 22 (1-3), 313-325.
- Bernard, V.L. and J. K. Thomas. 1990. Evidence that Stock Prices do not Fully Reflect the Implications of Current Earnings for Future Earnings. *Journal of Accounting and Economics* 13 (December), 305-340.
- 11. Bonner, S.E., Z. Palmrose, and S.M. Young. 1998. Fraud Type and Auditor Litigation: An Analysis of SEC Accounting and Auditing Enforcement Releases. *The Accounting Review* 73 (October), 503-532.
- Brandon, D.M., A.D. Crabtree, and J.J. Maher. 2004.
 Non Audit fees, Auditor Independence, and Bond Rating. Auditing: A Journal of Practice and Theory 23(2), 89-103.
- 13. Carcello, J.V., and A.L. Nagy. 2004. Audit Firm Tenure and Fraudulent Financial Reporting. *Auditing: A Journal of Practice and Theory* 23 (2), 55-69.
- Chung, H., and S. Kallapur. 2003. Client Importance, Nonaudit Services, and Abnormal Accruals. *The Accounting Review* 78 (October), 931-955.
- 15. Duh, R., W. Lee, and C. Hua. 2009. Non-Audit Service and Auditor Independence: An Examination of the Procomp Effect. *Review of Quantitative Finance and Accounting* 32(1), 33-59.
- DeAngelo, H., L. DeAngelo, and D.J. Skinner. 1994. Accounting Choice in Troubled Companies. *Journal of Accounting and Economics* 10, 193-225.
- 17. Dechow, P.M., R.G. Sloan, and A.P. Sweeney. 1995.
 Detecting Earnings Management. *The Accounting Review* 70, 193-225.
- Dechow, P.M., and I.D. Dichev. 2002. The Quality of Accruals and Earnings: The Role of Accrual Estimation Errors. *The Accounting Review* (January), 35-59.
- DeFond, M. L., K. Raghunandan, and K. R. Subramanyam. 2002. Do Non-audit Service Fees Impair Auditor Independence? Evidence from Going Concern Audit Opinions. *Journal of Accounting Research* (September), 1247-1274.
- 20. Farber, D.B. 2005. Restoring Trust after Fraud: Does Corporate Governance Matter? *The Accounting Review* 80 (April), 539-561.
- Fairchild, R. 2008. Auditor Tenure, Managerial Fraud and Report Qualification: a Behavioral Game-Theoretic Approach. *International Journal of Behavioral Accounting and Finance* 1(1), 27-37.
- Feroz, E.H., K. Park, and V. Pastena. 1991. The Financial and Market Effects of the SEC's Accounting and Auditing Enforcement Releases. *Journal of Accounting Research* 29 (Supplement), 107-142.
- 23. Feroz, E.H., J.W. Lin, and J.S. Yang. 2007. The Effects of the SEC's Accounting and Auditing Enforcement Releases on the Market Response to Earnings Information. Working Paper, University of Washington Tacoma.

- Firth, M. 2002. Auditor–Provided Consultancy Services and their Associations with Audit Fees and Audit Opinions. *Journal of Business Finance and Accounting*, 29(5&6), 661–693.
- Francis, J.D., D. Philbrick, and K. Schipper. 1994.
 Shareholder Litigation and Corporate Disclosures. *Journal of Accounting Research* 32, 137-164.
- Francis, J.R., E.L. Maydew, and H.C. Sparks. 1999.
 The Role of Big 6 Auditors in the Credible Reporting of Accruals. Auditing: A Journal of Practice & Theory 18, 17-34.
- 27. Frankel, R.M., M.F. Johnson, and K.K. Nelson. 2002. The Relation between Auditors' Fees for Nonaudit Services and Earnings Management. *The Accounting Review* 77 (Supplemental), 71-105.
- 28. Guay, et al. 1996. A Market-Based Evaluation of Discretionary Accrual Models. Journal of Accounting Research 34 (Supplement), 83-105.
- Healy, P., and J. Wahlen. 1999. A Review of the Earnings Management Literature and Its Implications for Standard Setting. Accounting Horizons, 365-383.
- Johnson, S., H. Ryan, and Y. Tian. 2009. Managerial Incentives and Corporate Fraud: The Sources of Incentives Matter. Review of Finance 13(1), 115-145.
- Kinney, W.R. Jr. and R. Libby. 2002. Discussion of the Relation between Auditors' Fees for Nonaudit Services and Earnings Management. *The Accounting Review* (Supplement), 107-114.
- 32. Kinney, W.R., Z.V. Palmrose, and S. Scholz. 2004. Auditor Independence, Non-Audit Service, and Restatement: Was the U.S. Government Right? *Journal of Account Research* 42, 561-588.
- Larcker, D.F., and S.A. Richardson. 2004. Fees Paid to Audit Firms, Accrual Choices, and Corporate Governance. *Journal of Accounting Research*, 42(June), 625–658.
- 34. Leng, F., E. H. Feroz, Z. Cao, and S.V. Davalos. 2011. The Long-Term Performance and Failure Risk of Firms Cited in the US SEC's Accounting and Auditing Enforcement Releases. *Journal of Business Finance* and Accounting 38 (7&8), 813-841.
- Levitt, A. 1998. The Numbers Game. Speech Delivered at the NYU Center for Law and Business. New York, NY, September 28. Available at www.sec.gov.
- Lin, J.W., M.I. Hwang, and J.D. Becker. 2003. A Fuzzy Neural Network for Assessing the Risk of Fraudulent Financial Reporting. *Managerial Auditing Journal* 18 (8), 657-665.

- 37. Lys, T., and R. L. Watts. 1994. Lawsuits Against Auditors. *Journal of Accounting Research* 32, 65-93.
- 38. Matsumoto, D. 2002. Management's Incentives to Avoid Negative Earnings Surprises. *The Accounting Review* 77 (September), 483-514.
- Moriarty, G.B., and P.B. Livingston. 2001.
 Quantitative Measures of the Quality of Financial Reporting. Financial Executive 17 (July/August), 53-56.
- 40. McNichols, M.F. 2000. Research Design Issues in Earnings Management Studies. *Journal of Accounting and Public Policy* 19, 313-345.
- 41. Nelson, M. W., J. A. Elliott, and R.L. Tarpley. 2002. Evidence from Auditors about Managers' and Auditors' Earnings Management Decisions. *The Accounting Review*, 175-202.
- 42. Nourayi, M.M. 1994. Stock Price Responses to the SEC's Enforcement Actions, *Journal of Accounting and Public Policy* 13 (Winter), 333-347.
- Owers, J. E., C. M. Lin, and R. C. Rogers. 2002. The Informational Content and Valuation Ramifications of Earnings Restatements. *International Business and Economics Research Journal*, 71-84.
- 44. Palmrose, Z.V., and S. Scholz. 2004. The Circumstances and Legal Consequences of Non-GAAP Reporting: Evidence from Restatements. Contemporary Accounting Research 21 (1), 139-180.
- 45. Palmrose, Z.V., V. J. Richardson, and S. Scholz. 2004. Determinants of Market Reactions to Restatement Announcements. *Journal of Accounting and Economics* 37(1), 59-89.
- Raghunandan, K., W.J. Read, and J.S. Whisenant. 2003. Initial Evidence on the Association between Nonaudit Fees and Restated Financial Statements. Accounting Horizons (September), 223-234.
- 47. Richardson, S., I. Tuna, and M. Wu. 2002 Predicting Earnings Management: The Case of Earnings Restatements. Working Paper, London Business School, University of Hong Kong.
- Schipper, K. 1989. Commentary on Earnings Management. Accounting Horizons (December), 91-102.
- Securities and Exchange Commission (SEC). 2003.
 Civil Action No. 03-CV-0671(DLC), available at www.sec.gov/litigation/complaints/comp17954.htm.
- 50. Wu, M. 2002. A Review of Earnings Restatements. University of Hong Kong.