Conflict of Interest?: Executive-Auditor Relationship and the Likelihood of a SEC-Prompted Restatement

Henry Lyford

Claremont McKenna College

Recommended Citation

http://scholarship.claremont.edu/cmc_theses/39
Conflict of Interest?: Executive-Auditor Relationship and the Likelihood of an SEC-Prompted Restatement

SUBMITTED TO

PROFESSOR MARC MASSOUD

AND

DEAN GREGORY HESS

BY

HENRY ANDREW LYFORD

FOR

SENIOR THESIS
FALL 2010
11/29/2010
# TABLE OF CONTENTS

ACKNOWLEDGEMENTS.................................................................................4

INTRODUCTION & RESEARCH MOTIVATION........................................5

LITERATURE REVIEW & HYPOTHESES...............................................14

METHODOLOGY..........................................................................................21

DATA & RESULTS.......................................................................................27

CONCLUSION................................................................................................31

BIBLIOGRAPHY.............................................................................................34
Acknowledgements

I would like to extend special thanks to the following parties for aiding me in this study. First, I would like to thank Professor Massoud for his kind, even if sometimes firm, advice and guidance throughout the entire process. He kept me on task and always motivated me to do my best work possible. Secondly, I would like to thank Professor Cronqvist for his invaluable insight concerning research approach and empirical method. He challenged me to think critically about my proxies and regressors in order to make the results as meaningful as possible. I would also like to thank Professor Batta for providing information on useful past studies and sources for data. I would like to thank Professor Caskey at UCLA for his list of restatements which were vital in this study. Finally, I would like to thank Claire Shaw and Charlotte Hogan for their editing and emotional support during the entire process.
I. Introduction and Research Motivation

This study seeks to further examine the connection between executive-auditor relationship and the occurrence of fraudulent accounting. This has been a contentious issue in the field of accounting for many years, but came into the spotlight after the meltdowns of companies like Enron and WorldCom in the late 1990s and early 2000s. At the core of these disasters was, at the very least, questionable accounting and, in many cases, accounting fraud. In some cases, independent auditors turned a blind eye to blatantly inaccurate and misleading financial statements which deceived investors, regulators, and the general public. These deceived parties rapidly became fixated on the relationship between the companies and their independent auditors who signed off on their fraudulent financial statements. Questions surfaced about the nature of their relationship: Can you reasonably expect an auditing company that is employed by a firm to disagree with the firm’s management decisions? Was the economic bond between the companies so strong that auditors would ignore their professional duties in exchange for continued business and/or higher fees from the company? Could anything be changed about the accounting profession to ensure that such events could never occur again? Some felt that the system needed reform in order to proceed. Other people felt that the rules in place were adequate—Enron and other companies just failed to follow the rules.

In response to public outrage about the accounting scandals of the late 1990s and early 2000s, the government made several changes with regard to company-auditor

---

2 Mark W. Nelson, "Ameliorating Conflicts of Interest in Auditing: Effects of Recent Reforms on Auditors and their Clients," (July 11, 2005.).
relationship. In 2000, Congress mandated the issuance of a proxy statement which disclosed the type and amount of fees paid to independent auditors.4 In November 2000, the SEC introduced Final Rule S7-13-00 which sought to alter auditor independence requirements. The new Rules defined independence as “a mental state of objectivity and lack of bias” and demanded that the auditor be independent both “in fact” and “in appearance”.5 There were four considerations for determining independence. Independence was said to be impaired when: “1) the auditor has mutual or conflicting interest with the audit client; 2) the auditor audits the auditor’s own work; 3) the auditor functions as management or an employee of the audit client; or 4) the auditor acts as an advocate for the audit client”6 Many felt that these measures were not sufficient to prevent future crises, so Congress passed the Sarbanes-Oxley Act (hereafter referred to as SOX or the Act) in July of 2002. SOX is widely considered the most sweeping financial regulation legislation since the Securities Acts of 1933 and 1934.7 The Act introduces a number of rules and makes several rules in place considerably stricter. Some of the changes include: Harsher penalties for executives that sign off on inaccurate statements, incentives and protection for “whistleblowers”, and new rules for firm-auditor relationship.8 Many academics and experts felt that the government acted too quickly and without first attempting to determine the problems at the root of the accounting scandals; they felt SOX was “hastily put together in response to several high-profile

5 Richard M. Frankel et al., The Relation between Auditors' Fees for Non-Audit Services and Earnings Quality (Cambridge, Mass.: MIT Sloan School of Management, 2002), 4.
6 ibid., 4
corporate scandals”. The new rules concerning client-auditor relationship are most relevant to this study.

Under the new rules, audit firms are prohibited from working with a firm if one of the firm’s executives was employed by the auditing firm “during a one-year period preceding the date of the initiation of the audit”. Additionally, the new regulations include rules requiring the mandatory rotation of independent auditors. Policy makers suspected that a lengthy relationship between the firm and the auditor would cause them to form a strong bond—and auditor professionalism and independence would be compromised. A final relevant provision of SOX puts new restrictions on receiving services from the auditor and forbids the auditor from providing certain consultancy services and some other services for an audit client. Under the new rules, any fees for non-audit services greater than five percent of the total fees paid to the auditor must be pre-approved by the company’s audit committee. Again, law makers and the general public believed that the economic bond between the two parties had become too strong and that the large amounts of fees for non-audit services were partly to blame.

The three variables examined in this study were audit fees, fees for other services, and length of executive-auditor relationship. Audit fees refer to fees directly related to the audit of the company by the independent auditing firm. Fees for other services refer to

---

10 Macey, A Pox on both Your Houses: Enron, Sarbanes-Oxley and the Debate Concerning the Relative Efficacy of Mandatory Versus Enabling Rules, 352
13 Macey, A Pox on both Your Houses: Enron, Sarbanes-Oxley and the Debate Concerning the Relative Efficacy of Mandatory Versus Enabling Rules, 352
any fees billed by the auditor for anything other than the audit. Firms were required to
disclose the first two variables in proxy statements after fiscal year 2000. The intuition
behind the selection of these variables was that they are all possible indicators of the
strength of relationship and economic bond between the firm and its auditor. The fees
may be the fair value of the work performed by the auditor, but it is also possible that a
firm which pays its auditor high fees may be reimbursing the auditor for their stamp of
approval on inaccurate financial statements.

There are opposing theoretical arguments about the effects of these different variables
on auditor independence and therefore the issuance of accurate and honest financial
statements. Much of the literature in this area focuses on the fees for non-audit services
but much of this argument can be extended to audit fees as well. One side of the
argument contends that auditors’ decisions are certainly influenced by the fees paid to
them by their clients. An auditing firm retains business with a firm by pleasing the firm’s
management and the audit team accomplishes this by agreeing with the internal audit
team. Additionally, an auditor with a strong economic bond with their client—caused by
high fees—will have a vested interest in the success of the company and this could cause
“impaired auditor independence”. Former chairman of the SEC Arthur Levitt expressed
his concern with the situation in 2000. He was afraid that consulting and other services
from the independent auditor “shorten the distance between the auditor and
management”. Levitt also commented that the “broad array of business arrangements”
(in addition to a simple audit) could make the auditor less of a “skeptical professional

14 Michael M. Firth, "The Provision of Nonaudit Services by Accounting Firms to their Audit Clients," 
15 Abbott, An Empirical Investigation of Audit Fees, Nonaudit Fees, and Audit Committees*, 219
who must be satisfied before signing off on a financial statement, and more like any other service vendor who must satisfy the client to make a sale”. Concern in this area is not limited to Arthur Levitt. Professor Michael Firth discusses two reasons why non-audit fees threaten the independence of the auditor:

“1) the audit firm is unwilling to ‘criticize’ the work done by its consultancy division, and 2) the audit firm does not want to lose lucrative consultancy services […] and is therefore more reluctant to disagree with management’s interpretation of accounting matters”.

The counter argument asserts that there is no connection between fees paid to the auditor and the occurrence of accounting fraud—and argues that higher fees may in fact lead to lower likelihood of accounting fraud in some situations. They assert that one would expect high audit fees, when company size and complexity is controlled for, to be correlated with a lower occurrence of accounting fraud. This is because larger amount of fees implies that the auditor spent more time and effort in examining the financial statements and therefore they are more likely to catch errors. Similarly, they would argue that high fees for other services from the auditor are also less likely to lead to accounting fraud. These fees are an indication of the auditor’s increased knowledge of the firm and therefore they are more likely to issue accurate statements the first time. In effect, there is a positive “knowledge externality” created when the auditor provides joint services for

16 M. A. Geiger, "Audit Fees, Nonaudit Fees, and Auditor Reporting on Stressed Companies." Auditing 22, no. 2 (2003), 55.
17 Firth, The Provision of Nonaudit Services by Accounting Firms to their Audit Clients, 7
the client. These arguments only defend the fees assuming that restatements occur because of honest mistakes by the firm and auditor, but this side of the argument also accommodates the possibility that the mistakes were purposeful. For example, an independent auditor receiving a high amount of fees for other services will not want to risk the possibility of losing this client. Essentially, they have a “good thing going for them” and do not want to lose it by approving a statement which they know to be incorrect. Additionally, some have argued that firms will naturally keep their level of other fees from their auditor at an appropriate level because they know the public will be concerned about the appearance of non-independence.

This argument extends to the issue of length of relationship between the executive and the auditor. One could argue that a) a longer relationship between the two firms would increase the auditor’s knowledge of the firm and therefore it is less likely that they will miss inaccurate information in the financial statements and b) clients are difficult to obtain and retain and therefore a company would not want to risk losing a long-term client (either by action of clients pressured to distance themselves from auditor or by action of the government) by approving a financial statement they know to contain false information. It is also possible that, under mandatory rotation rules, auditors will feel stronger pressure to “capitulate to clients’ wishes” because the new rules will lead to “intra-firm rivalries among accountants, as new accountants compete for higher client satisfaction survey results than their predecessors [who didn’t have to follow the new

---

rules]. A former SEC Chairman, Roderick Hill, shared his opinion with the United States Senate during 2002:

“Forcing a change of auditors can only lower the quality of audits and increase their costs. The longer an auditor is with a company the more it learns about its personnel, its business and its intrinsic values. To change [auditors] every several years will simply create a merry-go-round of mediocrity”.

Some argue that the auditor’s decision to approve a false statement is essentially a cost-benefit analysis and is self-governing in that the costs almost always outweigh the benefits. The costs in this case include loss of reputation, lawsuits, and possible restrictions by the SEC concerning future conduct; the benefits include retaining business and possibly receiving higher fees from the client. Loss of reputation in the industry, or “reputational capital” is devastating and therefore the auditor will not want to “jeopardize it to satisfy the demands of any one client”. Reputation is extremely hard to establish and makes the auditor more professionally appealing to clients who want to demonstrate to investors and the government that they are trustworthy and accurately audited. The auditor’s reputation, in the opinion of one author, is essentially “serves as a collateral bond for independence”.

23 Macey, A Pox on both Your Houses: Enron, Sarbanes-Oxley and the Debate Concerning the Relative Efficacy of Mandatory Versus Enabling Rules, 353
24 Carcello, Audit Firm Tenure and Fraudulent Financial Reporting, 3
25 Abbott, An Empirical Investigation of Audit Fees, Nonaudit Fees, and Audit Committees*, 221
This study provides increased and unique investigation into this area of concern. The restatements included in this study come within a pivotal period for accounting practice in the United States. Starting with fiscal year 2000, firms were required to disclose the amount they paid their independent auditor in audit fees and fees for other services. The U.S. Government did not require disclosure of audit fees, audit-related fees, tax services, information technology services, and non-audit services before this year. The most recent cases used were from fiscal year 2002. Events after this date were not used because the Sarbanes-Oxley Act was passed in June, 2002. This act was directed at some of the alleged causes of accounting fraud addressed in this empirical study, including independent auditor tenure and fees for audits and non-audit services. The act did not take effect until the first fiscal year-end report after November 15, 2004, so feasibly this study could have included events from fiscal year 2003. This study chose to exclude events from this year, however, because it is very possible that firms, conscious of the regulations and in anticipation of the act taking effect, would alter their behavior for this fiscal year. (Further study could determine whether this in fact was the case).

Additionally, this study approaches the length of relationship in a novel way. Instead of using the independent auditor’s length of relationship with the firm, this study defines tenure as the length of relationship between the executive at the firm and the independent auditing firm. This approach was prompted by the idea that independent auditors’ level of comfort with a company is determined by their interaction with the management of the firm. This study is important for several reasons. As mentioned

---

28 Agrawal, *Corporate Governance and Accounting Scandals*, 379
29 Zhang, *Economic Consequences of the Sarbanes-Oxley Act of 2002*, 75
above, there is still controversy in the accounting profession over the necessity and effectiveness of the Sarbanes-Oxley Act. This study, in using a unique sample group, seeks to determine if the rules imposed by the act are correctly focused on the true causes of accounting fraud. There is inherently a cost on firms when more regulations are imposed. The auditing process becomes difficult when these rules are in place, and this costs firms time and money. Of course, no one would disagree that the new rules were appropriate—provided they effectively addressed the true causes of fraud. The negative effects of the collapse of companies such as Enron and WorldCom were catastrophic and therefore it is not surprising that the government stepped in to reform the rules. But if empirical studies show that some of the new regulations were unnecessary, then the government should rethink their application because of the costs they place on companies.\textsuperscript{30} The ultimate objective of this study is to determine whether the data supports the restrictive legislation of the Sarbanes-Oxley Act. The implications of the results from this study are useful to government regulators in their approach toward rules for company-auditor relationship.

The results of this investigation show no significant correlation between a) audit fees and b) fees for other services from the independent auditor, and the likelihood of an SEC-prompted restatement. The results do indicate a negative correlation (at the 5% significance level) between length of executive-auditor relationship and the likelihood of

such a restatement. This finding is consistent with the findings of Carcello, who defines tenure as length of firm-auditor relationship.  

II. Literature Review & Hypotheses

The large amount of literature and past studies on this topic of firm-auditor relationship and its effect on the reliability of financial statements indicate that it is a topic of high interest and controversy in the accounting profession. There are numerous studies which examine this relationship in different ways. They examine, among many other things, the effect of auditing committee composition, corporate governance, and auditor tenure with the firm. There is an underlying question present in each of the studies: Is there a conflict of interest inherent in an auditor’s relationship with a firm? The most relevant prior studies—as they relate to the study at hand—will be discussed briefly in this section.

It is not surprising that many of the past studies in this area are related to the connection between non-audit services from the auditor and a lack of independence, because one of the largest effects of the Sarbanes-Oxley Act of 2002 dealt with this issue. In one study in the United Kingdom, a positive correlation between audit fees and consultancy services was determined. This indicates that two common measures of firm-company relationship are correlated. The author notes that this correlation approaches zero when one controls for firm specific events such as mergers, acquisitions, or bankruptcies. This implies that these events most likely act as a third variable which

---

31 Carcello, Audit Firm Tenure and Fraudulent Financial Reporting, 55
32 Geiger, Auditor Tenure and Audit Reporting Failures., 54
causes both high audit costs and high consultancy costs from the independent auditor. Additionally, the results of the study indicate that high non-audit service fees are associated with clean audit reports—meaning that the auditor supposedly found no error to report. The author proposes two potential reasons for the relationship. First, it is possible that there is a lack of auditor independence. An auditor whose independence is impaired “may be more inclined to give a clean audit opinion when a qualified report is, in fact, appropriate.” Firth also notes the possibility that the consultancy services were necessary to clear up uncertainty or disagreement prior to the audit. He admits that, regretfully, the study cannot distinguish between the two possible causes, however, and therefore cannot conclude that high non-audit services are associated with less independence of the auditor. Another United Kingdom study by the same researcher sought to determine the connection between companies with high-agency costs and the amount of non-audit services. Companies with high-agency costs always require independent auditors to approve their financial statements and are very concerned with reassuring their creditors and investors of the security of the company. This study questions whether companies which have such a large concern with appearing honest and trustworthy to their investors will choose to purchase smaller amounts of non-audit services to be, or at least appear, independent of their auditor. The results from the observation of 500 companies show that companies whose agency-cost proxies were higher would choose to purchase smaller amounts of non-audit services. These findings are corroborated by the results of a 2003 study. This study looked for a connection between the characteristics of the audit committee and the amount of non-audit service

33 Firth, Auditor-Provided Consultancy Services and their Associations with Audit Fees and Audit Opinions, 687
34 Firth, The Provision of Nonaudit Services by Accounting Firms to their Audit Clients, 1-21
fees (as measured by the ratio of non-audit service fees to normal audit fees). The idea behind this study was that firms which are wary of their appearance of independence to investors and creditors, as made evident by very independent auditing committees, may also choose to keep their non-audit service fees small to further promote the image of independence. The findings in this study show a significant negative relationship between audit committees comprised of only independent directors (commonly considered healthy for independence) and non-audit service fees. These findings support the argument discussed in the introduction that the appearance of independence is so important for companies that they would not risk tainting this with large amounts of non-audit services.

A 2002 study at the Massachusetts Institute of Technology also investigates the possible effects of non-audit services. This study sought to find the connection between fees for auditor’s non-audit services and earnings quality. Like the present study, this investigation gathered auditor fee information from proxy statements which were required after 2000, and presented evidence that firms which purchased more non-audit services from their auditor were more likely to barely meet or beat analysts’ forecasts—an important objective for companies. This proxy may indicate suspicious action by the auditor because they allowed a financial statement which conveniently just met the benchmarks desired by the firm’s management. The SEC has expressed concern that the desire to meet analysts’ expectations and “project a smooth earnings path creates pressure on auditors to permit their clients to meet those objectives”. The authors conclude that their findings support the argument that the provision of non-audit services by the

36 Frankel et al., *The Relation between Auditors’ Fees for Non-Audit Services and Earnings Quality*, 15
independent auditor strengthens the economic bond between the parties. A related study by the same author examined the relationship between auditors’ fees for non-audit services and a) earnings management and b) market reaction to the disclosure of fees. The evidence in this study showed a positive correlation between non-audit fees and small earnings surprises, and a negative correlation between audit fees and small earnings surprises. The results also show a negative correlation between fees for non-audit services and stock values on the day of the disclosure—though the effect is small.

A 2003 study sought to determine the relationship between audit fees and non-audit fees, and the audit reporting for stressed companies in the manufacturing industry. The idea behind this study is the possibility that, when companies are financially stressed and would highly benefit from a favorable financial statement, the amount of the fees paid to the auditor will encourage them to “see things the client’s way”. The results show a significant positive correlation between the amount of fees paid for audit services and the likelihood of receiving a going-concern modified audit opinion. This finding suggests that high payments for audit services may lead auditors to give a good opinion for the company’s financial statements—at least for manufacturing companies. This study found no such correlation for non-audit services which suggests non-audit services do not have an adverse effect on the judgment of independent auditors.

A 2004 study by Carcello was prompted by the new SOX regulations to determine if mandatory firm rotation would reduce the occurrence of auditing fraud by limiting the length of auditor tenure with a firm. This study examined data on firms

---

37 Frankel, The Relation between Auditors’ Fees for Nonaudit Services and Earnings Management, 71
38 Frankel et al., The Relation between Auditors’ Fees for Non-Audit Services and Earnings Quality
39 Geiger, Auditor Tenure and Audit Reporting Failures., 53
which committed fraud between 1990 and 2001 by matching them with non-fraudulent firms and looking for a connection between independent auditor tenure and the occurrence of accounting fraud. According to the results, fraudulent accounting is most likely to occur in the first three years of the auditor-client relationship. No evidence from this study suggests that longer auditor tenure is correlated with a higher likelihood of accounting fraud and therefore the author of the study opposes mandatory firm rotation.  

The dependent variable proxy for the study at hand was chosen based on its usefulness as an indicator of suspicious accounting behavior and also its availability. The companies included in the sample all filed a restatement at some point between 2001 and 2003. These restatements were not called for by the internal audit team or the independent auditor. In a study by Agrawal, the connection between corporate governance and accounting scandals was examined to see if there was a conflict of interest innate in some corporate governance systems which led to accounting fraud. As a proxy for accounting scandals, this study used the issuance of restatements using the rationale that “serious accounting problems tend to be self-unraveling and force a firm to revise its financial statements. Under this assumption, a restatement is synonymous with the incidence of a serious accounting problem”. The logical argument against this methodology would contend that restatements cannot be unequivocally considered a bad thing. It is true that a restatement could be an indication of foul play by the firm, but the company could also have made an honest mistake in the initial statement which the firm or auditor later realized. For this reason, this current study chose to take the proxy requirement a step further so it would be more likely that the accounting activity was

40 Carcello, Audit Firm Tenure and Fraudulent Financial Reporting, 55
41 Agrawal, Corporate Governance and Accounting Scandals*, 402
fraudulent. The companies included in our sample did not call for the restatement; the restatement was demanded by the SEC. It is possible, however, that the companies accidentally missed the issue throughout the process, though it is less likely.

The literature on this subject, as well as prior studies and economic intuition, led to the development of three hypotheses for the three variables being considered: Amount of audit fees, amount of fees for non-audit services, and length of relationship between the CEO and the independent auditing firm.

For Audit Fees (X₁):

\[
H₁: \text{ There will be no correlation between the amount of fees paid for audit services and the occurrence of an SEC-prompted restatement. }
\]

The Carcello study discussed above indicated a correlation between audit fees and receiving a positive audit opinion from the independent auditor, but this study considered financially stressed companies only.\(^{42}\) A positive opinion is extremely important when a company is in a volatile financial situation. One should note that the study at hand did not control for being in a financially stressed position. This is unlikely to be an issue because it is improbable that many (if any) of the firms in the study were in dangerous economic positions. Therefore, it is predicted that there will not be a correlation between amount of audit fees and an SEC-prompted restatement.

\(^{42}\) Carcello, Audit Firm Tenure and Fraudulent Financial Reporting, 55
For other fees from the auditor ($X_2$):

**H$_2$:** *There will be a negative correlation between the amount of fees paid for other services from the independent auditor and the occurrence of an SEC-prompted restatement.*

The rationale behind this hypothesis is that the independent auditor does not want to risk this additional income from the firm by allowing a questionable restatement. The spotlight of suspicion will be directed at the auditor-firm relationship in the event that they miss or ignore incorrect information in the original statement.\(^{43}\) Additionally, higher fees for other services could indicate a strong knowledge of the company being audited so mistakes are more likely to be caught by the independent auditor.\(^{44}\)

For CEO-auditor tenure:

**H$_3$:** *There will be a negative correlation between CEO-auditor tenure and the occurrence of an SEC-prompted restatement.*

A related study by Carcello for the firms from 1990-2001 showed no correlation between these variables. Similarly, as with the variable discussed in the second hypothesis, there is an argument that longer relationship means that the auditor knows the firm and its management more intimately and therefore is unlikely to make a mistake. Additionally, a longer relationship means that the auditor is content doing business with the firm and

\(^{43}\) Geiger, *Audit Fees, Nonaudit Fees, and Auditor Reporting on Stressed Companies.*, 56
\(^{44}\) Frankel et al., *The Relation between Auditors' Fees for Non-Audit Services and Earnings Quality*
may be less likely risk that business by approving a financial they know contains an error.45

III. Methodology

The first step in this process was to select the firms for the sample group using a proxy for accounting fraud. This proxy used was based on a list of fraud cases from 1995 to 2007 from the website of Professor Caskey at UCLA Andersen School of Management.46

As discussed in the introduction, the range of years from which to gather incidents of fraud was intentionally short. It included restatements from fiscal years ranging from 2000 and 2002. The information for the companies used was from the fiscal year prior to the year in which the restatement occurred as was consistent with a 1997 study by Gerety and Lehn.47

Professor Caskey’s list shows restatements for companies from this period. The list indicates who prompted the restatement. The options were: a) “Company”: This meant that the restatement was called for by the company’s internal auditors; b) “Auditor”: This meant that misstated information was either missed or ignored by the internal auditors but was noticed by the independent auditors and they called for the restatement; c) “SEC”: The misstated information was either missed or ignored by both the internal and external auditors and the SEC had to call for the restatement. A previous

45 Carcello, Audit Firm Tenure and Fraudulent Financial Reporting, 55
47 Gerety and - Lehn, The Causes and Consequences of Accounting Fraud, - 587-- 599
study on the effect of audit firm tenure and accounting fraud defined fraud as “being charged with a violation of Rule 10(b)-5 by the SEC” 48. This study, however, drew its sample from the years 1990-2001. This proxy for fraud could not be used for the current study because the usable range of years is much shorter. If the proxy used by Carcello were used in this study, the sample size would be so small that any findings could not be deemed statistically significant. The final criterion for companies, whose restatements were prompted by the SEC and whose date of restatement fell within the desired range, was the exchange in which the company was traded. Only companies traded in the NYSE or NASDAQ were used. The size of this original sample group was 60 companies. The list also indicated whether the issue for the restatement was related to revenue recognition. For ten of the companies in the final sample group, the restatement concerned revenue recognition.

The next step was to gather the desired information for each company. This included: CEO tenure with as executive, audit firm tenure with the company, audit fees for the years desired, and fees for all other services from the independent auditors. CEO name and tenure were discovered using Bloomberg’s “Management Feature”. If the company was not listed in this feature then the company’s 10-K statement for the year was examined. This statement includes the date when the CEO joined the firm. Through Bloomberg’s “Company Filings” feature, each company’s DEF-14 proxy statement was examined. This statement included name of independent auditor, audit fees paid to this company for the fiscal year, and fees for other services paid to this company. Many companies included the year they began working with their external auditors. If they did

---

48 Carcello, Audit Firm Tenure and Fraudulent Financial Reporting, 55
not list this information then proxy statements from previous years were examined to
determine the exact year the firm began using the external auditor. “Tenure” in the study
was the length of the CEO-auditor relationship so the lesser of CEO tenure and auditor
tenure was used (i.e. the length of time both parties had been with the company). “Audit
fees” are explicitly stated in the proxy statement. The other fee section was for
information technology services. For a few companies, the remaining fees were
separated into “audit-related”, “tax-related”, and “non-audit service (NAS)” fees.
Because only a few companies had information technology fees, and the other categories
were not usually separated, they were all aggregated into a category called “Other Fees
from Independent Auditor” for the data purposes. For companies with a mid-year fiscal
year end, an average of the two years was used. Finally, in order to match with a firm,
Standardized Industrial Classification (SIC) code and total assets (for the fiscal end of the
desired year) were also obtained. The sample size at this point was 28 companies.

The next step was to match each company with a company that did not have to
issue a restatement in the period considered. Previous studies support this as an empirical
method because “it provides a natural control for industry and size-related effects in our
returns analysis”.\textsuperscript{49} The companies were matched on the two criteria used in several prior
studies. The first criterion was industry; the matched firm needed the same first two
digits of SIC. The second criterion was size as defined by total assets.\textsuperscript{47} The firm with
the same first two digits of SIC code and with the smallest absolute value for
[Restatement firm’s total assets – non-restatement firm’s total assets] was selected as a
match. Using this process, the control group selection was absolutely objective. At this

\textsuperscript{49} Mark M. H. Lang, "Voluntary Disclosure and Equity Offerings: Reducing Information Asymmetry Or
point, one more firm, Tyco International, was excluded from the study because there was no firm within its industry with similar total assets. The data for several control variables was then gathered for the 27 sample firms and their matches. This data was obtained from Bloomberg and included the number of employees, the amount of sales, and the book-to-market ratio at the end of the desired fiscal year.

**Regression**

The regression includes the variables of audit fees, fees for other services, and length of relationship along with several control variables.

\[
\text{SEC} = b_0 + b_1 \text{AUDFEE} + b_2 \text{NAFEES} + b_3 \text{TENURE} + b_4 \text{TA} + b_5 \text{MKTCAP} + b_6 \text{XCHNGE} + b_7 \text{EMPLOY} + b_8 \text{BGFIVE} + b_9 \text{BKMKT}
\]

Where:

- **SEC** = Dummy where which assigns a 1 if the company had a restatement prompted by the SEC and a 0 if otherwise.
- **AUDFEE** = Audit fees divided by total assets for year in question.
- **NAFEES** = Total of all other fees for services by the independent auditor, divided by total assets.
- **TENURE** = The lesser of the length (in years) of the auditing firm’s relationship with the firm and the CEO’s tenure at the firm as chief executive.
- **TA** = Natural log of the total assets in millions USD at the end of the year.
- **MKTCAP** = Natural log of the company’s market capitalization at the end of the fiscal year.
- **XCHNGE** = Dummy variable which assigns 1 if company was traded on NYSE and 0 if otherwise.
- **EMPLOY** = Number of employees at the fiscal year end.
**BGFIVE** = Dummy variable which assigns 1 if one of Big Five auditors and 0 if otherwise.

**BKMKT** = The company’s book-to-market ratio at the end of the year.

---

**The Dependent Variable**

Dependent variable is a dummy value used as a proxy for possible suspicious accounting activity. Companies which had restatements called for by the Securities and Exchange Commission (meaning that the statements passed the internal and independent auditors) were assigned a 1. The companies in the control group had a 0 for this value. This proxy does not indicate whether the internal and independent auditors accidentally missed the issue that was misstated or whether the firm and auditors purposefully ignored the issue.

**Regressors**

The regressors in this study were audit fees (AUDFEE), fees paid to the auditor for other services (NAFEES), and length of relationship between the CEO and independent auditor (TENURE). In accordance with prior studies, the units for relationship length were years.\(^5\) Audit fees and other fees were divided by total assets to express them as relative to company size.\(^6\) This is an inherent control for industry in this study because company matching was determined by Standard Industry Classification (SIC) code.

---

\(^5\) Carcello, *Audit Firm Tenure and Fraudulent Financial Reporting*, 10
\(^6\) Firth, *Auditor-Provided Consultancy Services and their Associations with Audit Fees and Audit Opinions*, 670
Control Variables

As in prior similar studies, multiple control variables were included in the regression to reduce omitted variable bias. These variables were used in previous studies with similar regressions. Included in this regression were control variables for size including variables for total assets, market cap, and number of employees. The rationale behind controlling for size was that larger companies could have lengthier and more complicated financial statements which could cause the internal and independent auditors to miss an error. A consideration for whether the company was traded on the NYSE was included because two prior studies mentioned stricter audit rules typical of this exchange—which could lead to a more time consuming and therefore expensive audit.\textsuperscript{52,53} A variable representing whether or not the auditor was a Big Five auditing firm (BGFIVE) was also included to determine if this was correlated with the dependent variable. A prior study indicates that these firms are “quality-differentiated suppliers” and suggest a negative relationship between retaining a Big Five firm for auditing and the incidence of fraud.\textsuperscript{54} The final control variable was the companies’ book-to-market ratio (BKMKT) at the end of the fiscal year—a proxy for growth. This variable was included as a control because one would expect companies that are growing at a fast rate to “face greater pressure to maintain high growth rates”.\textsuperscript{55} A positive relationship between book-to-market and the dependent variable was therefore expected.

\textsuperscript{52} Agrawal, \textit{Corporate Governance and Accounting Scandals*}, 399  
\textsuperscript{53} Gerety and Lehn, \textit{- the Causes and Consequences of Accounting Fraud}, 595  
\textsuperscript{54} Carcello, \textit{Audit Firm Tenure and Fraudulent Financial Reporting}, 55  
\textsuperscript{55} ibid., 12
IV. Data & Results

The matching process was successful in that an appropriate industry peer was determined for all but one of the companies. As mentioned previously, the exception was Tyco International, which had far more total assets than the nearest company with the same two-digit SIC code and therefore was excluded. Of the 27 matched, 10 were matched to a company with the same four-digit SIC code. The average difference in total assets for a matched pair was $233.2 million. 13 of the 27 companies, however, had a difference in total assets of less than $20 million and the average percentage difference in total assets was approximately 17%.

The three variables examined in this study were audit fees, fees for other services, and length of relationship between firm CEO and the independent audit company. No correlation was predicted for amount of audit fees and the occurrence of an SEC-prompted restatement. A negative correlation was predicted for the amount of fees for other services and the occurrence of an SEC-prompted restatement. The t-statistic, and corresponding p-values, for the variables of audit fees and fees for other services from the independent auditor did not achieve any level of significance, indicating that one cannot conclude that their true coefficients differ from zero. Therefore, based on the sample used, this study does not indicate any correlation between any kind of fee paid to the independent auditor and the occurrence of an SEC-prompted restatement.

Only one of the variables in the regression demonstrated a significant correlation with the occurrence of an SEC-prompted restatement. The regression shows a correlation, right at the 5% significance level, between length of the CEO-auditor
relationship and the occurrence of a restatement prompted by the SEC. Influenced by the results of past studies, the researcher in this investigation correctly hypothesized a negative correlation between CEO-auditor tenure and the likelihood of an SEC-prompted restatement. The coefficient for the variable of length of relationship is -0.041, the t-statistic is -2.00 and the corresponding p-value is 0.051.
Table 1. Companies included in the sample group and their matches based on SIC code and total assets

<table>
<thead>
<tr>
<th>Restatement prompted by SEC</th>
<th>Ticker</th>
<th>Fiscal Year</th>
<th>SIC</th>
<th>Total Assets ($ mil)</th>
<th>Matched Control Group</th>
<th>Ticker</th>
<th>Fiscal Year</th>
<th>SIC</th>
<th>Total Assets ($ mil)</th>
<th>Difference in Assets</th>
<th>Percentage diff.</th>
</tr>
</thead>
<tbody>
<tr>
<td>HOMESTAKE MINING</td>
<td>HM</td>
<td>2000</td>
<td>1041</td>
<td>1,419.38</td>
<td>SOUTHERN COPPER CORP</td>
<td>SCCO</td>
<td>2000</td>
<td>1021</td>
<td>1,770.56</td>
<td>351.18</td>
<td>24.74%</td>
</tr>
<tr>
<td>CONAGRA FOODS INC</td>
<td>CAG</td>
<td>2000</td>
<td>2038</td>
<td>12,295.80</td>
<td>SARA LEE CORP</td>
<td>SLE</td>
<td>2000</td>
<td>2053</td>
<td>11,611.00</td>
<td>684.80</td>
<td>5.57%</td>
</tr>
<tr>
<td>ANIKA THERAPEUTICS INC</td>
<td>ANIK</td>
<td>2000</td>
<td>2836</td>
<td>28.98</td>
<td>EPIX PHARMACEUTICALS INC</td>
<td>EPIX</td>
<td>2000</td>
<td>2835</td>
<td>29.68</td>
<td>0.70</td>
<td>2.42%</td>
</tr>
<tr>
<td>LECROY CORP</td>
<td>LCRY</td>
<td>2000</td>
<td>3825</td>
<td>100.85</td>
<td>BADGER METER INC</td>
<td>BMI</td>
<td>2000</td>
<td>3824</td>
<td>98.02</td>
<td>2.83</td>
<td>2.80%</td>
</tr>
<tr>
<td>BRIGHTPOINT INC</td>
<td>CELL</td>
<td>2000</td>
<td>4812</td>
<td>687.79</td>
<td>GENERAL COMMUNICATION INC-A</td>
<td>GNCMA</td>
<td>2000</td>
<td>4813</td>
<td>679.01</td>
<td>8.78</td>
<td>1.28%</td>
</tr>
<tr>
<td>PAULSON CAPITAL CORP</td>
<td>PLCC</td>
<td>2000</td>
<td>6211</td>
<td>31.55</td>
<td>SIEBERT FINANCIAL CORP</td>
<td>SIEB</td>
<td>2000</td>
<td>6211</td>
<td>40.64</td>
<td>9.09</td>
<td>28.2%</td>
</tr>
<tr>
<td>PREPAID LEGAL SERVICES INC</td>
<td>PPĐ</td>
<td>2000</td>
<td>8111</td>
<td>77.77</td>
<td>FITI CONSULTING INC</td>
<td>FCN</td>
<td>2000</td>
<td>8111</td>
<td>146.13</td>
<td>68.37</td>
<td>87.91%</td>
</tr>
<tr>
<td>ZILA INC</td>
<td>ZILA</td>
<td>2001</td>
<td>2834</td>
<td>75.60</td>
<td>DIADEXUS INC</td>
<td>DDXS</td>
<td>2001</td>
<td>2834</td>
<td>53.37</td>
<td>22.23</td>
<td>29.40%</td>
</tr>
<tr>
<td>PAR PHARMACEUTICAL COS INC</td>
<td>PRX</td>
<td>2001</td>
<td>2834</td>
<td>216.93</td>
<td>NABI BIOPHARMACEUTICALS</td>
<td>NABI</td>
<td>2001</td>
<td>2836</td>
<td>314.62</td>
<td>97.70</td>
<td>45.04%</td>
</tr>
<tr>
<td>GEMSTAR-TV GUIDE INTL INC</td>
<td>GMST</td>
<td>2001</td>
<td>3651</td>
<td>9,341.51</td>
<td>MICRON TECHNOLOGY INC</td>
<td>MU</td>
<td>2001</td>
<td>3674</td>
<td>8,363.20</td>
<td>978.31</td>
<td>10.47%</td>
</tr>
<tr>
<td>NVIDIA CORP</td>
<td>NVDA</td>
<td>2001</td>
<td>3674</td>
<td>1,016.90</td>
<td>FINISAR CORPORATION</td>
<td>FNSR</td>
<td>2001</td>
<td>3674</td>
<td>1,030.00</td>
<td>13.09</td>
<td>1.29%</td>
</tr>
<tr>
<td>PHOTON DYNAMICS INC</td>
<td>PHTN</td>
<td>2001</td>
<td>3823</td>
<td>158.64</td>
<td>DIONEX CORP</td>
<td>DNX</td>
<td>2001</td>
<td>3823</td>
<td>173.68</td>
<td>15.05</td>
<td>9.49%</td>
</tr>
<tr>
<td>XEROX CORP</td>
<td>XR</td>
<td>2001</td>
<td>3861</td>
<td>27,645.00</td>
<td>RAYTHEON COMPANY</td>
<td>RTNB</td>
<td>2001</td>
<td>3812</td>
<td>26,656.00</td>
<td>1,000.00</td>
<td>3.65%</td>
</tr>
<tr>
<td>ALLIANT ENERGY CORP</td>
<td>LNT</td>
<td>2001</td>
<td>4911</td>
<td>6,237.93</td>
<td>ONEOK INC</td>
<td>OKE</td>
<td>2001</td>
<td>4923</td>
<td>5,855.30</td>
<td>384.62</td>
<td>6.17%</td>
</tr>
<tr>
<td>CRAFTMADE INTERNATIONAL INC</td>
<td>CFRT</td>
<td>2001</td>
<td>5063</td>
<td>59.13</td>
<td>MOORE HANDLEY INC</td>
<td>MHCO</td>
<td>2001</td>
<td>5072</td>
<td>49.03</td>
<td>10.10</td>
<td>17.07%</td>
</tr>
<tr>
<td>RESTORATION HARDWARE INC</td>
<td>RSTO</td>
<td>2001</td>
<td>5719</td>
<td>253.87</td>
<td>COST PLUS INCALIFORNIA</td>
<td>CPWM</td>
<td>2001</td>
<td>5719</td>
<td>252.87</td>
<td>10.99</td>
<td>4.12%</td>
</tr>
<tr>
<td>WILLIAMS-SONOMA INC</td>
<td>WSM</td>
<td>2001</td>
<td>5719</td>
<td>891.93</td>
<td>TRANS WORLD ENTERTAINMENT CP</td>
<td>TWMC</td>
<td>2001</td>
<td>5735</td>
<td>1,002.00</td>
<td>110.07</td>
<td>12.34%</td>
</tr>
<tr>
<td>ANNUITY AND LIFE RE HOLDINGS</td>
<td>ANNRF</td>
<td>2001</td>
<td>6311</td>
<td>2,310.77</td>
<td>MERCURY GENERAL CORP</td>
<td>MCY</td>
<td>2001</td>
<td>6331</td>
<td>2,316.54</td>
<td>5.77</td>
<td>0.25%</td>
</tr>
<tr>
<td>TALX CORP</td>
<td>TALX</td>
<td>2001</td>
<td>7373</td>
<td>34.00</td>
<td>INTERACTIVE INTELLIGENCE INC</td>
<td>IINN</td>
<td>2001</td>
<td>7372</td>
<td>43.51</td>
<td>9.51</td>
<td>27.98%</td>
</tr>
<tr>
<td>GERBER SCIENTIFIC INC</td>
<td>GRB</td>
<td>2001</td>
<td>7373</td>
<td>478.41</td>
<td>COGNEX CORP</td>
<td>CGNX</td>
<td>2001</td>
<td>7373</td>
<td>406.90</td>
<td>71.50</td>
<td>14.95%</td>
</tr>
<tr>
<td>ENTERASYS NETWORKS INC</td>
<td>ETS</td>
<td>2001</td>
<td>7373</td>
<td>750.04</td>
<td>CERNER CORP</td>
<td>CERN</td>
<td>2001</td>
<td>7372</td>
<td>712.30</td>
<td>37.74</td>
<td>5.05%</td>
</tr>
<tr>
<td>EDISON SCHOOLS INC</td>
<td>EDSN</td>
<td>2001</td>
<td>8211</td>
<td>394.50</td>
<td>DEVR INC</td>
<td>DV</td>
<td>2001</td>
<td>8221</td>
<td>391.68</td>
<td>2.82</td>
<td>0.72%</td>
</tr>
<tr>
<td>MASSEY ENERGY CO</td>
<td>MEE</td>
<td>2002</td>
<td>1222</td>
<td>2,241.43</td>
<td>ARCH COAL INC</td>
<td>ACI</td>
<td>2002</td>
<td>1222</td>
<td>2,182.81</td>
<td>58.62</td>
<td>2.62%</td>
</tr>
<tr>
<td>NANOPHASE TECHNOLOGIES CORP</td>
<td>NAXN</td>
<td>2002</td>
<td>3999</td>
<td>20.01</td>
<td>RONSON CORP</td>
<td>RONCQ</td>
<td>2002</td>
<td>3999</td>
<td>12.89</td>
<td>7.12</td>
<td>35.60%</td>
</tr>
<tr>
<td>DT CORP-CLASS B</td>
<td>IDT</td>
<td>2002</td>
<td>4813</td>
<td>1,607.92</td>
<td>YOUNG BROADCASTING INC-A</td>
<td>YBTVQ</td>
<td>2002</td>
<td>4833</td>
<td>892.58</td>
<td>715.34</td>
<td>44.49%</td>
</tr>
<tr>
<td>UNUM GROUP</td>
<td>UNM</td>
<td>2002</td>
<td>6321</td>
<td>45,299.50</td>
<td>AFLAC INC</td>
<td>AFL</td>
<td>2002</td>
<td>6321</td>
<td>45,058.00</td>
<td>201.50</td>
<td>0.45%</td>
</tr>
<tr>
<td>CPI CORP</td>
<td>CPY</td>
<td>2002</td>
<td>7221</td>
<td>172.72</td>
<td>MAC-GRAY CORP</td>
<td>TUC</td>
<td>2002</td>
<td>7215</td>
<td>174.63</td>
<td>1.90</td>
<td>1.10%</td>
</tr>
<tr>
<td>AMERCO</td>
<td>UHAL</td>
<td>2002</td>
<td>7513</td>
<td>3,732.32</td>
<td>DOLLAR THRIFTY AUTOMOTIVE GP</td>
<td>DTG</td>
<td>2002</td>
<td>7514</td>
<td>2,100.37</td>
<td>1,631.94</td>
<td>43.72%</td>
</tr>
</tbody>
</table>

**AVERAGE** $ 233.17 16.91%
### Table 2. Regression results

\[
SEC = b_0 + b_1 \text{AUDFEE} + b_2 \text{NAFEES} + b_3 \text{TENURE} + b_4 \text{TA} + b_5 \text{MKTCAP} + b_6 \text{XCHNGE} + b_7 \text{EMPLOY} + b_8 \text{BGFIVE} + b_9 \text{BKMKT}
\]

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>T-Statistic</th>
<th>P-Value</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUDFEE</td>
<td>0.0000395</td>
<td>0.0000353</td>
<td>1.12</td>
<td>0.269</td>
<td>[-0.0000315, 0.0001105]</td>
</tr>
<tr>
<td>OTHER</td>
<td>0.0000355</td>
<td>0.0000472</td>
<td>0.75</td>
<td>0.457</td>
<td>[-0.0000596, 0.0001306]</td>
</tr>
<tr>
<td>TENURE</td>
<td>-0.041096*</td>
<td>0.0205004</td>
<td>-2.00</td>
<td>0.051</td>
<td>[-0.0823611, 0.0001692]</td>
</tr>
<tr>
<td>TA</td>
<td>0.0102244</td>
<td>0.1019385</td>
<td>0.10</td>
<td>0.921</td>
<td>[-0.1949671, 0.2154158]</td>
</tr>
<tr>
<td>MKTCAP</td>
<td>-0.0002963</td>
<td>0.0878193</td>
<td>-0.00</td>
<td>0.997</td>
<td>[-0.1770673, 0.1764746]</td>
</tr>
<tr>
<td>XCHNGE</td>
<td>0.0379667</td>
<td>0.1673464</td>
<td>0.23</td>
<td>0.822</td>
<td>[-0.2988841, 0.3748175]</td>
</tr>
<tr>
<td>EMPLOY</td>
<td>-1.79e-07</td>
<td>3.55e-06</td>
<td>-0.05</td>
<td>0.960</td>
<td>[-7.33e-06, 6.97e-06]</td>
</tr>
<tr>
<td>BGFIVE</td>
<td>0.0677841</td>
<td>0.317318</td>
<td>0.21</td>
<td>0.832</td>
<td>[-0.570944, 0.7065121]</td>
</tr>
<tr>
<td>BKMKT</td>
<td>-0.0099403</td>
<td>0.0310772</td>
<td>-0.32</td>
<td>0.751</td>
<td>[-0.0724955, 0.0526149]</td>
</tr>
<tr>
<td>_CNSTNT</td>
<td>0.4803447</td>
<td>0.3683867</td>
<td>1.30</td>
<td>0.199</td>
<td>[-0.2611794, 1.221869]</td>
</tr>
</tbody>
</table>
V. Conclusion

This study was prompted by the possible existence of an auditor conflict of interest. The study questioned whether the economic bond formed between the independent auditor and its client, through audit fees, fees for other services, and a long length of relationship, could cause the auditing form to either miss or ignore errors or irregularities in the initial financial statement, leading the Securities and Exchange Commission to call for a restatement. The results do not indicate any correlation between either audit fees or fees for other services, and the occurrence of an SEC-prompted restatement. The findings show a significant negative correlation between one of the three variables investigated, length of CEO-auditor relationship, and the occurrence of an SEC-prompted restatement. This finding corroborates the findings of similar prior studies. This study hypothesized a negative correlation between these variables using the rationale that length of relationship will a) increase an auditor’s knowledge of the client so they are less likely to miss an error in the firm’s financial statements and/or b) an auditor knows the difficulty of initially obtaining, and retaining a business relationship for a long period of time, and therefore would not want to risk this relationship by willfully allowing the client to disclose untrue information in a financial statement. A company risks its professional reputation when it signs off on an inaccurate financial statement, and auditors who develop a poor reputation for honesty are less appealing to management teams who want their companies’ financial statements to be received as honest and reliable.\textsuperscript{56} History has shown the severe consequences for firms, like Arthur

\textsuperscript{56} Frankel, The Relation between Auditors' Fees for Nonaudit Services and Earnings Management, 72
Andersen, who violate accounting rules and principles and consequently destroy their reputation in the industry.57

The idea behind using SEC-prompted restatements as the dependent variable proxy was that, by accident or not, both the company and the independent auditor missed the piece of inaccurate information in the original statement. This study does not assert that these companies purposefully misstated information and then pressured their auditors to do the same. Further investigation into the actual events or misstatements which caused the restatements in the sample group could either increase or decrease the meaningfulness of this study. For instance, if a lengthy investigation of each restatement in the sample group reveals that the majority of the incidents involved indictment, and possibly conviction by the SEC then one can more strongly assert that these were cases of purposeful manipulation of financial statements.

The usefulness of this study lies in its ability to provide recommendations to lawmakers, financial market regulators, and the public, concerning auditor independence. These parties are interested in creating a system which will ensure that the disasters—partly caused by accounting scandals—of Enron, WorldCom, and many other companies will never occur again. Legislation introduced after these events attempted to ensure the independence of auditors by including measures designed to limit the strength of the economic bond between the firms. This study, to the extent that its proxies and sample size can provide insight, indicates that there is no correlation between a) audits fees and b) fees for other services, and the occurrence of a SEC-prompted restatement. The study also indicates a significant negative correlation between the length of CEO-auditor

---

relationship and the occurrence of a SEC-prompted restatement—which counters the argument that a longer relationship means the integrity of the independent auditor is more likely to be compromised.
Bibliography


Nelson, M. W. ((July 11, 2005)). Ameliorating conflicts of interest in auditing: Effects of recent reforms on auditors and their clients.


