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Fraud Characteristics and SEC Enforcements Against Independent Auditors

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Introduction

Financial statements, filed with the SEC, are a joint collaboration of firm's management and independent auditor (Carcello et al., 2011).[1] Management prepares the financial statements, and the auditor attests to the reliability of the reported financial information (DeFond et al., 2018). When financial reporting fraud (FRF) is detected, the alleged fraudulent firm and/or managers face private civil class-action from shareholders and federal sanctions from regulatory agencies (Karpoff et al., 2008a). In addition to the fraudulent firms and managers, shareholders and regulatory agencies, i.e., the SEC and the Public Company Oversight Board (PCAOB), may pursue charges against the auditor. For instance, PCAOB oversees auditors' violations of Generally Accepted Accounting Principles (GAAP), PCAOB auditing standards and rules, and the SEC Rules (Carcello et al., 2011). Thus, enforcements are not only issued against the fraudulent firms and/or managers, but sometimes also against auditors.

Prior literature has examined extensively the auditor's litigation risk (Kaplan and Williams, 2013; Kadous and Mercer, 2012; Reffett, 2010; Cornell et al., 2009; Bonner et al., 1998); however, little is known about the SEC enforcements against the auditor (DeFond et al., 2018). Primarily, the SEC investigates federal securities laws violations and issues accounting and auditing enforcements releases (AAERs) (25 SEC Docket 2, 1982) or litigation releases (LRs), against firms with materially misstated financial statements. The SEC has also found various violations by the auditors, such as violating the auditor independence rule (SEC, 2015), or deficient audits, which is failure to gather sufficient competent audit evidence and to exercise due professional care (Beasley et al., 2013).

The SEC finds auditing related violations in 17 percent (Eutsler et al., 2016) to 39 percent (Bonner et al., 1998) of the total investigated fraud cases. In these cases, the SEC finds the auditor responsible for failing to identify the FRF in due time and charges the auditor with auditing violations. Examining the AAERs/LRs, the evidence shows that in the remaining 61 – 83 percent of the fraud cases, the SEC discloses two different findings regarding the auditor. In some cases, the SEC finds that the fraud scheme was concealed from the auditor or that the auditor was misled during the audit, and when there is no such finding, the SEC is silent on the role of the auditor in auditing the fraudulent financial statements. In sum, the SEC has three different auditor-related findings: (1) the auditor is charged, (2) the fraud scheme was concealed from the auditor, and (3) there is no particular finding regarding the auditor, i.e., the SEC is silent about the auditor.

Peecher et al. (2013) argue, theoretically, that the auditors' accountability framework depends on audit outcomes rather than the attributes of auditors' judgment process. Thus, the auditors' accountability framework is an outcome-penalty framework. According to this framework, the three SEC findings, charged, silent or concealed, are determined based on auditor's opinion on the audited financial statements and subsequent detection of the FRF. The overall auditing procedures followed during the auditing process are not taken into consideration. Therefore, charged, silent and concealed findings are affected by the type and the extent of the misreporting in the financial statements. The purpose of this study is to empirically test the outcome-penalty accountability framework. I test the framework by examining the association of the three SEC's auditor-related findings and the fraud characteristics, i.e., fraud duration, fraud amount, collusion, type of fraud and perpetrator's position in the fraudulent firm. The sample of fraudulent firms is identified through the AAERs/LRs issued by the SEC, where the company and/or manager was charged with Rule 10(b)-5 violation. In other words, Rule 10(b) charges companies and/or managers with the intent to misreport, thus the intent to commit fraud.

[1] In the rest of this study, "auditor" refers to independent/external auditors as distinguished from internal auditors. Also, this study does not distinguish between independent audit firms and auditors/partners working for them.

The results indicate a weak association between the fraud characteristics and the SEC's findings against the auditors. Fraud amount and collusion among perpetrators increase the probability of the SEC charging the auditor as compared to the probability of being silent. The perpetrator's executive position decreases the probability of the SEC charging the auditor as compared to the probability of being silent. Fraud characteristics do not significantly increase or decrease the odds of the auditor being charged as compared to the odds of the SEC stating that the fraud was concealed. Overall, only a few fraud characteristics are associated with the SEC's auditor-related findings, which is not consistent with an outcome-penalty accountability framework.

By contrast, the results indicate that the auditor type, whether the auditor is a Big N auditor or not, is significantly associated with the SEC's findings. More specifically, when the fraudulent financial statements are audited by a Big N auditor, the SEC is more likely to remain silent or to find that the fraud scheme is concealed from the auditor as compared to charging the auditor. Prior literature argues that Big N auditors provide better quality audits (Francis, 2004; DeAngelo, 1981). Also, a plausible argument is that big auditing firms have more resources than the small auditing firms to support their work when being investigated by the SEC. This evidence is consistent with a process-reward accountability framework where the auditors are rewarded for the auditing process regardless of subsequent FRF detection. In a process-reward system, the penalties, or the lack of, that the SEC enforces against the auditor are not affected by the type of FRF that was not detected. Under such accountability framework, the SEC's findings, charged, silent and concealed, are determined by examining the auditing process carried out by the auditor, and disregarding the auditing outcome, i.e., missed FRF.

This study makes two important contributions. First, the findings of research study provide empirical insight into the discussion of whether the current regulatory system relies on audit outcomes or on attributes of auditors' judgment processes. The SEC's purpose in issuing enforcements against the auditor is to improve audit quality by holding auditors accountable. DeFond et al. (2011) find that the presence of the SEC regional offices or recent enforcements issued by the SEC significantly influence the audit quality of the independent auditor. Further, Carcello et al. (2011) find that the PCAOB inspection process has led to improved audit quality. The accountability framework, employed by the regulatory bodies in disciplining auditors, impacts audit quality. Thus, examining auditor accountability framework contributes to the current discussion on audit quality provided by the independent auditors.

Second, the findings provide insights to auditors in managing risks in subsequently detected FRF. When auditors fail to supply high audit quality, they face serious consequences, such as sanctions from the SEC (Beasley et al., 2013), litigation risk (Bonner et al., 1998), reputation risk (Weber et al., 2008) and enhanced inspection from the PCAOB. Therefore, auditors are constantly trying to manage engagement risks (Johnstone and Bedard, 2004; 2003) and to maximize audit quality in order to avoid facing any of the above consequences. One approach to manage perceived risk is resignation from high-risk clients (Shu, 2000; Bockus and Gigler, 1998). However, auditors are not always successful in avoiding risky clients. Issuance of an AAER/LR suggests that the auditor failed to identify a risky client in due time. Consequently, it is important that auditors take additional steps during audit procedures to reduce the risks associated with high-risk clients that were not identified during the client acceptance process. Thus, in an attempt to minimize engagement risk, it is essential for auditors to understand what aspects of audit process would decrease their likelihood to be named as a defendant by the SEC.

The rest of the article is organized as follows: Section II provides a review of the accountability framework and develops the hypothesis. Sections III and IV describe the sample and the empirical model used in this study. Section V presents the results and Section VI concludes this study.

Theoretical Background and Hypothesis Development

Enforcements and Findings

Publicly held companies are required, under Federal securities laws, to have their financial statements audited by an independent auditor prior to their filing with the SEC. The financial statements remain the responsibility of the company's management; however, the auditor provides reasonable assurance that they are free of material misstatement, and fairly represent the financial position of the company (PCAOB - Auditing Standards (AS) 3101[2]). Auditors are the gatekeepers, who verify or assess corporate disclosures, to protect investors (Coffee, 2004).

[2]PCAOB – AS3101 accessed here: https://pcaobus.org/oversight/standards/auditing-standards/details/AS3101

The SEC has continuously emphasized the fundamental role that the gatekeepers, i.e., auditors, play in achieving its mission to protect investors and the capital market. Former Chair of the SEC, Mary Jo White, considered auditors the key gatekeepers who ensure shareholders of high-quality financial reports (White, 2015). On a similar note, Andrew Ceresney, former Director of Division of Enforcement of the SEC, considered independent auditors to be critical gatekeepers who attest that issuers are making timely, comprehensive, and accurate disclosure (Ceresney, 2016a). Given the SEC's focus on financial reporting (White, 2013), auditors' work warranted tighter supervision. Therefore, 'Operation Broken Gate' and Financial Reporting and Audit Task Force (referred to as FRAud Task Force) were introduced in 2013 as part of the Division of Enforcement.[3] 'Operation broken gate' seeks 'to identify auditors who fail to carry out their duties and responsibilities consistent with professional standards' (SEC, 2013–207). FRAud Task Force's mission is to detect and prevent financial reporting and accounting fraud (Ceresney, 2013).

The SEC's tighter supervision resulted in a substantial increase, as compared to prior years, in enforcements issued for undetected FRF. In 2016, the SEC filed 868 enforcement actions, the most in the SEC's history (SEC, 2016), and a substantial increase from 807 and 755 enforcements in 2015 and 2014, respectively (SEC, 2015; 2014). These initiatives also resulted in a substantial increase in the number of auditor proceedings under Rule 102(e), which regulates auditor accountability and independence, from 37 respondents in 2013 to 76 in 2015 (Ceresney, 2016b). Also in 2015, the SEC charged two national audit firms, BDO and Grant Thornton, which were the first audit failure enforcements against a national audit firm since 2009 (Ceresney, 2016b). The following example illustrate a case when the SEC charges the auditor for missing the FRF.

> The complaint alleges that KPMG and its partners permitted Xerox to manipulate its accounting practices to close a $3 billion "gap" between actual operating results and results reported to the investing public.[4]

Yet evidence shows that the SEC charges the auditor, in total, in as low as 17 percent of undetected fraud cases (Kedia et al., 2017; Eutsler et al., 2016). This finding is, also, in contrast with Coffee's (2004) argument that failure in independent auditing was the key factor of 2001–2002 fraud cases. In cases when the auditor is not charged, the SEC either finds that the FRF was concealed from the auditor or is silent on the auditor's role when there is no such finding. Thus, in certain cases, the SEC finds that the fraud scheme is concealed from the auditor or that the auditor is misled during the audit. In other cases, the SEC does not have such particular findings regarding the role of the auditor in the detected FRF and remains silent. The following examples illustrate the finding when the SEC finds that the FRF is concealed from the auditor or the auditor is misled.

> "…Olesnyckyj misled Monster's outside auditors in an attempt to hide the backdating scheme by providing documentation to them that misrepresented the grant date of the stock option awards." LR 20004; AAER 2558 – February 15, 2007.

> *"*The complaint also alleges that Smith, Laskey, and Brooks took steps to prevent Quest's independent auditors from discovering the backdating, including the use of false written consents by Quest's board of directors.*"* LR 20950; AAER 2949 – March 12, 2009.

A priori all material misstatements, subsequently detected, are concealed from the auditors. In other words, the FRFs investigated by the SEC indicate that the auditor failed to detect them during the auditing procedures. If issuance of an AAER/LR is a measure of low audit quality (DeFond and Zhang, 2014) because the auditor failed to detect a material misstatement, it is important to examine those cases when the SEC did not find the audit deficient.

Enforcements and Accountability Framework

There is a relatively sparse academic literature that examines the SEC's enforcements against the auditors (Kedia et al., 2017). Three studies, Kedia et al. (2017), Eutsler et al. (2016), and Rollins and Bremser (1997) examine the SEC's decision to charge the auditor as a defendant when FRF has been subsequently detected. Table 1 provides a summary of these three studies. There are two literature gaps that these three studies have yet to address. The first gap relates to the SEC's auditor-related findings. All three studies examined a binary finding of the SEC, whether to charge the auditor as the defendant or not to charge the auditor. Analysis of the AAERs/LRs indicates that there are three, not two, possible auditor-related findings

[3] "FRAud" is the acronym of Financial Reporting and Audit.
[4] LR 17954; AAER 1709 – January 29, 2003

following the investigation of an alleged fraud by the SEC. Distinguishing among the three SEC's findings, described in detail in section 2.1 (i.e., charged, silent and concealed), is important to auditors. Auditors are constantly trying to minimize litigation risks, and a concealment finding from the SEC may lower their litigation risks.

Given the variability of findings that the auditors face from the SEC, it is important to examine the accountability framework that the SEC employs. In a theoretical study, Peecher et al. (2013) observed that auditors' accountability framework is predominantly based on outcome judgment and penalties. The auditors' performance is judged based on their conclusion together with subsequent adverse financial statement outcomes, and it is often manifested in the form of penalties. This type of framework motivates auditors to have a short-term compliance-based behavior slightly above the noncompliance threshold in order to avoid penalties. The authors further argue that an accountability system, based on the audit process judgment and reward, motivates auditors and increases audit quality by rewarding auditors for well-justified judgment processes, performance exceeding minimum compliance threshold, and improvement in fraud detection procedures.

The purpose of this study is to provide empirical evidence that the current enforcement system employed by the SEC, in overseeing auditors, is an outcome-penalty based framework. In an outcome-penalty based framework, the SEC's findings, charged, silent or concealed, are determined based on the auditing outcome. The penalties that SEC enforces against the auditor are affected by the type of FRF that the auditor failed to detect. *[See Table 1, pg. 77]*

The second gap relates to examining the fraud characteristics and their impact in the three SEC's findings on the auditor. Prior literature has examined various key factors that increase or decrease the probability that the auditor is charged or not charged by the SEC. However, variables that relate to fraud characteristics are rarely examined in the literature. Kedia et al. (2017) and Eutsler et al. (2016) control only for the violation tenure and the type of the violation, whereas Rollins and Bremser (1997) consider only the type of violation. Prior studies, which focus auditors' overall litigation risks, have examined only a few variables that capture characteristics of the FRF act. For instance, Bonner et al. (1998) examined whether certain fraud types result in a higher likelihood of litigation against independent auditors, while controlling for fraud tenure. In a footnote, the authors state that they attempted to measure several other control variables, such as whether management lied to the auditor, whether collusion was involved, the specific office of the auditing firm primarily responsible for the client, and the importance of the client to the auditor; however, sufficient information was not disclosed. Since 1998, over 20 years of additional data are available to supplement the design used by Bonner et al. (1998). This study addresses these two literature gaps by examining the association of the SEC's findings (i.e., charged, silent and concealed) with the fraud scheme characteristics. Further, given prior literature findings that auditor accountability framework relies on audit outcome rather than on audit process (Eutsler et al., 2016; Peecher et al., 2013; Reffett, 2010), this study examines empirically, the auditor's accountability framework. More specifically, this study examines whether auditing outcomes, operationalized as undetected fraud characteristics, significantly impact the SEC's decision to charge the auditor, to find that the fraud was concealed from the auditor, or to be silent.

Methodology

Sample

The SEC's enforcement activities are carried out by the Division of Enforcement, founded in 1972, and are reported in the issuance of an AAER or a LR (25 SEC Docket 2, 1982).[5] Given the limited amount of resources, the SEC investigates only misreporting cases which are expected to have an significant economic impact (Dechow et al., 2011). The SEC receives the indications of violating firms from various sources (Dechow et al., 1996), such as (i) reviews of Securities Act filings (1934, 1933), (ii) market surveillance of programs of the New York Stock Exchange (NYSE) and National Association of Securities Dealers and (iii) public complaints, tips, referrals from other law enforcement agencies, and the financial press. As of April 2019, the SEC has issued 4031 AAERs. An AAER does not have a standardized format and the information disclosed in each AAER varies by case. However, most AAERs follow a similar structure. The head of an AAER includes the date it

[5] From its beginning in 1937, the SEC had been issuing Accounting Series Releases (ASRs), primarily issued to inform interested parties on accounting and auditing matters. On April 15, 1982, the SEC announced that the previously issued ASRs would be substituted with two types of releases, namely Financial Reporting Releases (FRRs) and Accounting and Auditing Enforcement Releases (AAERs). FRRs are used to disclose updates of the codifications of financial reporting policies, whereas AAERs are used to announce accounting and auditing matters related to the SEC's enforcement activities (25 SEC Docket 2, 1982).

was issued, the title and the identification number of the document. The first paragraph, after the title, provides information about the judicial district in which the case was prosecuted, the defendant and the final decision issued. The second paragraph describes the alleged misreporting scheme by naming the organization involved, the type of misreporting committed, duration of the misreporting, estimation of the misreported amount, the individuals, organizations or independent auditor involved in the misreporting scheme and other information deemed relevant by the SEC. The amount of details disclosed about the misreporting scheme varies substantially in each AAER, and there is no official explanation provided on how the information disclosure is determined. The last paragraph enumerates the rules that the defendants violated and the penalties that are enforced against them. The final sentence in an AAER lists other AAERs or enforcement documents that have been prior issued on the same investigated case. A LR follows a very similar structure as an AAER.

This study uses two independent datasets to identify the fraud firms named in the AAERs and/or LRs, and the characteristics of the respective misreporting schemes. The first dataset is developed by Dechow et al. (2011) (herein after Dechow dataset) and is available for purchase through Marshall School of Business at University of Southern California.[6] The second dataset, named AAER/LR dataset, is developed by The Institute for Fraud Prevention's (IFP) (here in after IFP dataset) (now ACFE Research Institute) and is available through a data grant process.[7]

To develop the Dechow dataset, Dechow et al. (2011) examined the AAERs issued by the SEC since 1987 and identified 2,190 AAERs with 676 unique firms. The initial dataset has been continuously updated. The latest version of dataset was purchased on April 19, 2017.[8] The document that accompanies the purchase of the dataset states that it consists of 3,813 AAERs (1,540 firm misstatement events) issued between May 17, 1982, and September 30, 2016. The initial number of 3,813 AAERs is reduced to 3,556 after leaving out missing AAERs and AAERs that do not mention a specific company name. Also, the dataset contains 1,019 firm misstatement events that affect at least one of the firms' quarterly or annual financial statements.

The IFP dataset includes 882 fraud cases identified through the AAERs and the LRs issued by the SEC as of 2015. Part of these fraud cases were identified by the first and the second reports of the Committee of Sponsoring Organizations of the Treadway Commission (COSO reports). The first COSO report identified 294 fraud cases for 1987–1997 period (Beasley et al., 1999) and the second COSO report identified 347 cases (Beasley et al., 2010). Out of the total 882 fraud cases, 177 cases were not coded either for missing AAERs/LRs or missing GVKEY for the firm involved in the misreporting. Therefore, IFP dataset includes 705 fraud cases which have available data.

The Dechow dataset identifies the misreporting firms through the AAERs, whereas the IFP datasets uses both AAERs and LRs to identify the misreporting firms. There is an 80 percent overlap of the identified misreporting cases between the two datasets. Both datasets include only the enforcements where the company and/or officers are charged with Rule 10(b)-5 violation. This rule constitutes the primary antifraud statute included in Section 10(b) of the 1934 Securities and Exchange Act (Carcello and Nagy, 2004). In other words, Rule 10(b) charges companies and/or managers with the intent to misreport, thus the intent to commit fraud. The sample for this study consists of publicly traded firms that misstated their financial statements.

The final sample of misreporting firms in this study is obtained by merging the Dechow dataset and the IFP dataset initially by the CIK number, then by firm name, and lastly by AAER number. This merge yields 761 misreporting firms. Table 2 reports the final samples selection. There are 129 misreporting firms which do not have the CIK number. These firms are excluded from the final sample because additional data could not be collected from Compustat or Audit Analytics databases. There are 87 misreporting firms with missing perpetrator-related data and 135 misreporting firms with missing fraud amount data. Finally, 214 misreporting firms are excluded due to missing data for various control variables. This exclusion yields a final sample of 196 misreporting firms. In the following section and in Appendix A, each variable is defined, and the dataset sources are provided. *[See Table 2, pg. 78]*

Empirical Model

[6] https://sites.google.com/usc.edu/aaerdataset/home?authuser=0
[7] https://www.acfe.com/about-the-acfe/acfe-foundation/past-research
[8] Typically, the SEC issues multiple AAERs/LRs while each fraud case is being investigated.

Dependent Variable: SEC's Findings

The SEC makes three different auditor-related findings in the AAERs/LRs. In some cases, the SEC charges the auditors for negligent audit or violation of anti-fraud statutes (Beasley et al., 2013). In other cases, the SEC finds that the fraud act was concealed from the auditor. In the rest of the cases, the SEC is silent, i.e., neither charges nor proclaims that the fraud scheme was concealed. The dependent variable in this study is the SEC's auditor-related finding when the firm and/or executives are charged with Rule 10(b)-5 violation. The IFP dataset has an indicator variable 'Concealed from Auditor', which equals 1 if the SEC specifically stated that the fraud scheme was concealed from auditor and 0 otherwise. The fraud cases where 'concealed from auditor' equals 0 are filtered out, and then the AAERs, identified in Dechow dataset, are used to determine whether the SEC charges the auditors or whether the SEC is silent. Thus, the dependent variable in this study takes three values: charged, silent or concealed. SEC_FINDING equals 0 if the SEC charges the auditor, 1 if the SEC remains silent, and 2 if the SEC states that the fraud scheme is concealed from auditor.[9]

Independent Variable: Fraud Characteristics

Prior studies examining the auditors' litigation risk have controlled for different fraud characteristics and found mixed results. Bonner et al. (1998) analyzed the AAERs issued by the SEC and found that auditors have a higher probability of being sued for commonly occurring fraud and frauds arisen from fictitious transactions. The authors included the number of years with misstated financial information to control for fraud duration. Lastly, Rollins and Bremser (1997) examined three types of fraud violation as a determinant of the probability of the SEC enforcement against the auditor. The three violations included falsification of accounting records by the management, asset and/or revenue overstatement and inadequate disclosure in the financial statements. The results found that only the inadequate disclosure increased the probability of an SEC enforcement action against the auditor.

In sum, prior studies have controlled for some aspects of fraud characteristics in auditor litigation risk, yet the key fraud characteristics, regarding fraud amount, fraud scheme and perpetrators, are excluded from their models. This research study examines the impact of key fraud characteristics on the probability of the SEC's auditor-related findings. The key fraud characteristics included in the model are fraud duration, type of fraud (which includes revenue fraud, asset misreporting fraud and disclosure fraud), fraud amount, number of perpetrators and perpetrator executive position within the fraud firm.

Fraud duration (FR_DURATION) is expected to increase the probability of the SEC's enforcements against the auditor. Prior literature has found a positive but non-significant result when fraud duration is measured in years (Eutsler et al. 2016; Bonner et al., 1998); however, when fraud duration is measured in months, the results are positive and significant (Kedia et al., 2017). In several cases, fraud schemes last only a couple of months and affect only a limited number of quarterly or annual financial statements. Therefore, FR_DURATION is measured in this study in the number of quarterly financial statements affected by the misstatement. This variable is available in the Dechow dataset.

Every fraud scheme investigated by the SEC is unique; however, the following three fraud schemes are expected to have a significant impact. Revenue Fraud (REVFraud) is measured as a binary variable where 1 indicates whether a fraudulent firm misreported its revenue account and 0 otherwise. Prior literature cites meeting and beating earnings prediction as one of the common pressures to commit fraud. Hence, the income statement accounts are the most commonly manipulated to achieve that goal. Fraudulent schemes often affect balance sheet accounts, as well. The next type of fraud examined in this study is asset misreporting fraud (AMFraud), which equals 1 if assets are misreported and 0 otherwise. Finally, failing to disclose material information (DISCFraud) is examined in prior literature as having a significant effect on litigation risk (Eutsler et al., 2016; Rollins and Bremser, 1997). This variable is also measured as binary variable, where it equals 1 if the fraudulent firm failed to disclose information in the financial statements and 0 otherwise.

Prior literature (DeFond et al., 2018; Kedia et al., 2017; Eutsler et al., 2016; Kaplan and Williams, 2013; Dechow et al., 2011; Bonner et al., 1998) has not controlled for or examined the effect of the misreported amount, or the number of perpetrators, and the position of the perpetrators. The primary reason appears to be the lack of available data. Bonner et al.

[9] Based on the auditor's desired SEC finding, there is a logical order that would provide a ranking of the three findings. An auditor would prefer to receive a concealed finding from the SEC, then a silent statement, and then to be charged. Thus, concealed, silent and charged is a logical order from the auditor's perspective. However, it is not possible to use Ordinal Logit Regression as the Proportional Odds assumption is not satisfied.

(1998) stated in a footnote that they attempted to collect additional information on whether management lied to the auditor or whether collusion was involved, however there was not sufficient information. Since 1998, there are about 20 years of additional data available and the IFP dataset possesses the information on the misreported amount (FR_AMOUNT), measured in in U.S. dollars. Auditors are expected to be found more responsible for missing high-profile fraud schemes that involve high-ranking executives such as CEO, CFO or president, than low profile fraud schemes involving employees in non-executive positions. Therefore, the position of the perpetrator named in the AAERs/LRs (PERP_POSITION), available in the IFP dataset, is an indicator variable where it is equal to 1 if the perpetrator is the CEO, COO or the president of the fraudulent firm and 0 otherwise. Lastly, the IFP dataset has three indicator variables on the different positions held by the fraud perpetrators. The number of perpetrators (COLLUSION), involved in the fraud scheme, is calculated as the sum of these three indicator variables. COLLUSION is a continuous variable that takes the value of 0, 1, 2 or 3 perpetrators.

Control Variables: Firm Characteristics and Auditor Characteristics

Prior literature controls for two primary groups of control variables, firm characteristics and auditor characteristics. Firm size (FIRM_SIZE) is argued in the literature to be a key determinant of the litigation against the auditor (Eutsler et al., 2016). Furthermore, firm size affects the auditor's choice, i.e., bigger firms tend to choose Big Four auditors (PwC, KPMG, EY and Deloitte). Prior literature argues that bigger auditors are less vulnerable to litigation due to increased availability of resources (Bonner et al., 1998). Firm size is measured the natural logarithm of total assets reported in the year prior to the first misreported year or the year prior to that in cases where data was missing. Financial distress is a common red flag for fraud; therefore, bankruptcy filing from the firms increases the likelihood of litigation against the auditors (Kaplan and Williams, 2013). Issuance of a going concern issue (GC) by the independent auditors increases the likelihood of litigation against the auditor, since a going concern is an indicator of distress (DeFond et al., 2016; Kaplan and Williams, 2013). Eutsler et al. (2016) found that including a going concern issue (GC) in the audit opinion letter increases the probability of an AAER being issued against the auditor. In their model, the authors controlled for fraud tenure, fraud type measured as revenue or disclosure fraud, and number of misstated accounts. Only the number of misstated accounts statistically significantly increased the probability of an enforcement being issued by the SEC against the auditor. Kaplan and Williams (2013) find the opposite results. The authors report a negative association between GC reporting and auditor litigation, arguing that auditors deter lawsuits by issuing GC reports to financially stressed clients. Hence the auditors should have been aware of higher fraud risk. GC is measured as a binary variable and equals 1 if the auditor issued a going concern in their report.

Certain characteristics related to the auditor are found by prior literature to either increase or decrease the likelihood of enforcement from the SEC. Kedia et al. (2017) found that the SEC is significantly less likely to name a Big N auditor as a defendant. Beasley et al. (2010) also finds that, even though national firms audit most of the fraud firms, they are less likely to be named by the SEC in the enforcements. The authors strike the difference between the percentage of national firms, auding the fraud firms, and the percentage of national firms named in fraud cases enforcements. In addition, being classified as a Big N auditor (be it Big 4 or Big 5) increases the auditors' prestige (Rollins and Bremser, 1997) which is associated with higher audit quality and less enforcement risk. Therefore, a binary variable (BIG-N) is included to indicate whether the auditor is one of the five audit firms: PricewaterhouseCoopers LLP, Ernst and Young LLP, KPMG LLP, Deloitte and Touche LLP, Arthur Andersen LLP, and 0 otherwise. Auditor tenure (AUDIT_TENURE) with the client firms is found to be negatively associated with fraudulent reporting (Carcello and Nagy, 2004). Therefore, a variable is included to measure the number of consecutive years an auditor audited the same client until the last year of the fraud.

In 2002 after the passing of Sarbanes-Oxley Act (SOX), there was a change in the regulation of auditing profession. Prior to 2002, public auditors were supervised through a peer review system regulated by the American Institute of Certified Public Accountants (AICPA). Then, in the wake of large FRF scandals, SOX was passed, and the Public Company Accounting Oversight Board (PCAOB) was established to provide oversight of the auditing profession. Given the change in auditing oversight, a dummy year variable is included to control for before and after SOX fraud cases. Based on prior literature, the following empirical model is proposed:

$$\textbf{SEC\_Finding} = \beta_0 + \beta_1*\text{FR\_DURATION} + \beta_2*\text{FR\_AMOUNT} + \beta_3*\text{COLLUSION} + \beta_4*\text{REVFraud} + \beta_5*\text{AMFraud} + \beta_6*\text{DISCFraud} + \beta_7*\text{PERP\_POSITION} + \beta_8*\text{FIRM\_SIZE} + \beta_9*\text{AUDIT\_TENURE} + \beta_{10}*\text{GC} + \beta_{11}*\text{BIG-N} + \beta_{12}*\text{SOX} + \varepsilon \quad \textbf{(1)}$$

Descriptive Statistics And Results

Descriptive Statistics

The final sample in this study consists of 196 fraudulent firms. Table 3 – Panel A reports the descriptive statistics of the full sample and Panel B reports the descriptive statics by the SEC's finding (charged, silent, or concealed). On average, 11.7 quarterly financial statements are misreported, and the fraud scheme was perpetrated by 1.6 individuals. The majority of the perpetrators, 64.8 percent (127 perpetrators) hold top executive positions, i.e., CEO, COO or president, and the rest, 35.2 percent (69 perpetrators) hold non-executive positions. The three types of fraud examined in this study are not mutually exclusive as perpetrated fraud schemes are complex and often affect more than one type of financial statement. Therefore, the total fraud cases involving revenue, asset misreporting and disclosure fraud exceeds 100 percent. There are 122 (62.2 percent) fraud cases where revenue is misreported, 49 (25 percent) fraud cases where assets are misreported, and 74 (37.8 percent) fraud cases where fraud firm failed to disclose significant information in the financial statements.

On average, the auditors have audited the financial statements for 3 years and issued a going concern in the audit report 15.8 percent (31 cases) of the time. Most of the auditors, 78.6 percent (154 cases), are BIG N auditors. Lastly, over half of the fraud cases, 54.1 percent (106 cases) terminated before the passage of SOX, and 45.9 percent (90 cases) terminated after the passage of SOX. Untabulated T-test analysis, between the fraud cases that occurred before and after SOX, show that the mean fraud duration and mean audit tenure is statistically different. Fraud cases, which occurred before SOX, have a shorter duration than fraud cases, which occurred after SOX. Also, the auditors in fraud cases before SOX have a shorter tenure with the firms compared to fraud cases after SOX. Given these results, it is important to control for the issuance of SOX in the model.

In most of the fraud cases in the sample, 122 cases (62.2 percent), the SEC finds that the fraud scheme was concealed from the auditor. In 45 cases (23 percent), the SEC remains silent and does not have any particular finding regarding the auditor, and in the remaining 29 cases (14.8 percent), the SEC charges the auditor for auditing related violations. Recent studies report similar charging rates of auditors in the AAERs/LRs. Eutsler et al. (2016) and Kedia et al. (2017) find that auditors are charged in 17 percent of the cases. Earlier studies report a higher percentage of auditors being charged in the AAERs. Rollins and Bremser (1997) found that in 1/3 of the cases the SEC issued AAERs against the auditors, for the AAERs issued from 1982 through August 1991. Dechow et al. (1996) found 165 out of 436 AAERs (37 percent), between April 1982 and December 1992, to be issued against auditors for violations of auditing standards. Bonner et al. (1998) found that 39 percent of the 261 firms subject to SEC Enforcement actions between 1982–1995, have enforcements issued against auditors as well. *[See Table 3, pg. 79]*

In comparing the sample by the SEC's finding, fraud cases where the SEC is silent differs from the other two cases. On average, silent cases last longer (13.6 quarterly financial statements are misreported) as compared to charged cases (11.7) and concealed cases (11.1). Silent cases also involve fewer perpetrators, 1.1, on average, than the other two cases, and they also have the lowest percentage, 53.3 percent of top executives, as compared to 72.4 percent in charged group and 76.2 percent in the concealed group. In comparing the auditor characteristics, the fraud cases where the auditor is charged have the shortest audit tenure (2.8 years), the lowest percentage of Big N auditors (55.2 percent) and the highest percentage of fraud schemes terminated before the passing of SOX, as compared to the other two groups.

Table 4 reports the Pearson correlation coefficients among the independent variables. The results indicate statistically significant and positive Pearson correlation among the fraud characteristic indicators. Fraud duration has a positive and significant correlation with fraud amount (+ 0.38, two-tailed $p < 0.01$) and a significant positive correlation with revenue fraud (0.24, two-tailed $p < 0.01$). It is interesting to note that collusion has a negative and significant correlation with perpetrator position (-0.75, two-tailed $p < 0.01$). Fraud cases where top executives are involved in the fraud schemes have more perpetrators in total than fraud cases where top executives are not involved.[10] Regarding auditor characteristics, audit tenure has a positive and significant correlation with fraud duration (+ 0.40, two-tailed $p < 0.01$) and fraud amount (+ 0.19, two-tailed $p < 0.01$). Lastly, SOX has a negative and significant correlation with fraud duration (- 0.40, two-tailed $p < 0.01$) and audit tenure (- 0.57, two-tailed $p < 0.01$), but a positive and significant correlation with collusion (0.17, two-tailed $p <$

[10] This result needs to be interpreted with caution as the IFP dataset did not indicate the total number of perpetrators involved. Rather it indicated whether the perpetrators are top executives, non-executive employees, or part of the board of directors. The total sum of these three indicator variables yielded the number of the perpetrators in this study.

0.05). Thus, fraud cases that terminated after SOX was passed last longer and involve fewer perpetrators, and the auditor has a shorter tenure with the fraudulent firm. *[See Table 4, pg. 82]*

Multivariate Tests

This study uses Multinomial Logit Regression, where the charged finding is used as reference category. The Multinomial Logit Regression compares the odds of the SEC finding that the fraud scheme is concealed from the auditor or the odds of the SEC remaining silent to the odds of the SEC charging the auditor. Prior literature compared charged to not charged, whereas this study compares charged to concealed and charged to silent.[11]

Hypothesis H_1, which argues that the SEC's auditor-related findings are associated with fraud characteristics, is tested using Model 1. Table 5 reports the results from multinomial logistic regression, detailed in Model 1. The first part of the table reports multinomial regression results when comparing the probability of the SEC charging the auditor to the SEC remaining silent regarding the auditor. The results indicate partial support for H_1. The results show that the coefficients of fraud severity indicators, fraud amount, collusion and perpetrator's position are significantly different from zero, when comparing the odds of the SEC charging the auditor to remaining silent. More specifically, the effects of FR_AMOUNT (β_2 = - 0.47, two-tailed $p < 0.05$) and COLLUSION (β_3= - 1.60, two-tailed $p < 0.01$) are negative and significant, whereas PERP_POSITION (β_7 = + 1.87, two-tailed $p < 0.05$) is positive and significant. Thus, these results indicate that as the fraud amount and the number of perpetrators increases, the odds of the SEC remaining silent regarding the auditor decreases compared to the odds of the SEC charging the auditor. Therefore, as certain fraud characteristic changes, the severity of the SEC's findings increases as well. However, the opposite is true regarding the perpetrator's position. In fraud cases perpetrated by top executives, the SEC is more likely to remain silent than to charge the auditors. The remaining fraud severity indicators do not have a significant association with the SEC's findings. The second part of Table 5 reports regression results when comparing the probability of the SEC charging the auditor to the SEC finding that the fraud scheme was concealed from the auditor. The fraud characteristic indicators are not significantly different from zero when comparing the odds of the SEC charging the auditor to the odds of the SEC stating that the fraud was concealed from the auditor.

I examined the impact of several fraud characteristics on the SEC decision to charge or not to charge or to state that the fraud scheme was concealed from the auditor, and the results show that only fraud amount, collusion and perpetrator position partially affect the SEC decision. In an outcome-penalty accountability framework, as argued by Peecher et al. (2013), the penalty faced by the auditor is determined based on the majority of fraud characteristics, which was not detected by the auditor. Per the outcome-penalty accountability framework, all fraud severity characteristics would impact the SEC decision against the auditor, which is not supported by the results. The results indicate a weak association between the fraud characteristics and the SEC's statement regarding the auditor. Hence the results indicate that the auditors' accountability framework is consistent with a process-reward framework, where the auditors are rewarded for the procedures followed during the auditing process despite the ultimate result of not detecting FRF during the auditing procedures. In support of this conclusion, the results indicate that the coefficient on auditor type is positive and significant when comparing the odds of the SEC charging the auditor to the odds of the SEC remaining silent (β_{11} = 1.97, two-tailed $p < 0.05$) and to the odds of the SEC finding that the fraud scheme was concealed from the auditor (β_9 = 1.66, two-tailed $p < 0.01$). Hence, Big N auditors are less likely to be charged by the SEC than non-Big N auditors. Kedia et al. (2017) finds the same results regarding Big N auditors. The authors find that the SEC is less likely to charge Big N auditors, and when Big N auditors are charged, the SEC pursues less severe outcomes as compared to other auditors. Lastly, the relatively small percentage of the fraud cases where the auditor is charged, supports the conclusion that, more often than not, the auditor is not charged for subsequently detected fraud cases, but it is rewarded instead. *[See Table 5, pg. 83]*

Conclusions

In 2013, the SEC introduced Operation Broken Gate and Financial Reporting and Audit Task Force to oversee auditor performance, which substantially increased the number of the enforcements issued against the auditors. Yet the SEC names

[11] Untabulated results of binary logistic regression, where charged equals 1 and not charged equals 0, replicate the findings in Kedia et al. (2017), using the final sample in this study. More specifically, the Big N auditors are less likely to be charged by the SEC ($\beta_{Big\ N}$ = - 1.99, two-tailed $p < 0.01$). However, the findings show that including a going concern issue (GC) in the audit report does not significantly affect the likelihood of the SEC charging or not charging the auditor. Hence, the findings in Eutsler et al. (2016) are not replicated in the sample.

the auditor, in as low as 17 percent of total cases issued against fraudulent firms (Kedia et al., 2017; Eutsler et al., 2016). As such, there exists a discrepancy between the SEC's emphasis on the auditors' role as a gatekeeper and the total enforcements issued against the auditors. In this study I examine the accountability framework used by the SEC in issuing enforcements against the auditor. In a theoretical study, Peecher et al. (2013) observe that the regulatory entities, such as the SEC, use an outcome-penalty accountability framework to assess auditor performance. The penalties that the auditors face from the regulatory entities, such as fines, punitive damages and license removal, are determined based on the audit outcome, such as adverse financial statement outcome, which include bankruptcy, fraud or decrease in market capitalization. Further, the authors suggest that the regulatory entities should employ a process-reward accountability framework, where the auditors are rewarded based on the attributes of auditors' judgement processes, such as use of innovative audit procedures.

The results indicate a weak association between the fraud characteristics and the SEC's findings. Collusion among perpetrators and asset misreporting fraud schemes increase the probability of the SEC charging the auditor as compared to the probability of being silent. The perpetrator's executive position decreases the probability of the SEC charging the auditor as compared to the probability of being silent. Overall, only a few fraud characteristics affect the SEC's findings regarding the auditor, which is not consistent with the current auditor accountability framework being an outcome-penalty framework. In contrast, the auditor type, being a Big N auditor or not, significantly affects the SEC's findings. More specifically, the results show that the SEC is more likely to remain silent or state that the fraud scheme is concealed for a Big N than non-Big N auditor, as compared to charging the auditor. Given that Big N auditors are found to provide better quality audits in prior studies, the findings are more consistent a process-reward accountability framework.

This study makes two important contributions. First, the findings of this study provide empirical insights into the discussion of whether the current regulatory system relies on audit outcomes or on attributes of auditors' judgment processes. The SEC's aim in issuing enforcements against the auditor is to improve audit quality by holding auditors accountable. The accountability framework, employed by the regulatory bodies in disciplining auditors, impacts audit quality. Second, the findings provide insights to auditors in managing risks in subsequently detected FRF. When auditors fail to supply high audit quality, they face serious consequences. It is important that auditors take additional steps during audit procedures to reduce the risks associated with high-risk clients that were not identified during the client acceptance process. Thus, in an attempt to minimize engagement risk, it is essential for auditors to understand what aspects of audit process would decrease their likelihood to be named as a defendant by the SEC.

There are several limitations to this research. First, very little is known about the SEC's enforcement process against the auditors. There exists the probability that fraud characteristic indicators, other than the ones examined in this study, affect the SEC's decision-making process, when examining the auditor's responsibility in failing to detect FRFs. Second, the sample in this study includes over 25 years of FRF from 1985 until 2012. Several economic, legal and social factors have changed during this period, while this study only controls for the passage of SOX. Third, the cases where the SEC neither charges the auditor nor states that the fraud was concealed from the auditor, is a catch-all category. There are many potential explanations why the SEC does not make any statement regarding the auditor, which are not identified and controlled for in this study. AAERs/LRs do not have a standardized form for the information disclosed. Therefore, a silent finding might be a discretionary decision of the person drafting the AAERs/LRs.

These limitations also provide avenues for future research. First, future studies should examine further the fraud cases, where the SEC did not make any statement regarding the auditor and identify shared characteristics about these cases. Second, future studies should examine the penalties that the auditor received from the SEC. Do all auditing firms face the same penalties in similar fraud cases? Third, the sample in this study included fraud cases until 2012 and future studies can examine whether the findings in this study hold, while examining the most recent fraud cases investigated by the SEC.

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Appendix A: Variables List

Variable	Measurement	Data Source
DV–Dependent Variable		
SEC_FINDING	It equals 0 if the SEC charges the auditor, 1 if the SEC remains silent, and 2 if the SEC states that the fraud scheme is concealed from auditor.	Dechow dataset/IFP dataset/Hand collection
IV–Fraud Characteristics		
Fraud Duration (FR_DURATION)	The number of quarterly financial statements affected by the misstatement.	Dechow dataset
Fraud Amount (FR_AMOUNT)	Natural logarithm of the total dollar value of the amount of assets that was misappropriated, or the amount of loss caused.	IFP dataset
Collusion (COLLUSION)	The number of perpetrators involved in the fraud scheme calculated as the sum of three separate indicator variables.	IFP dataset
Fraud Type (REVFraud)	Indicator variable equals to 1 if the fraud scheme involved revenue misreporting, and 0 otherwise.	Dechow dataset
Fraud Type (AMFraud)	Indicator variable equals to 1 if the fraud scheme involved asset misreporting, and 0 otherwise.	Dechow dataset
Fraud Type (DISCFraud)	Indicator variable equals to 1 if the fraud scheme involved failure to disclose material information, and 0 otherwise.	IFP dataset
Perpetrator Position (PERP_POSITION)	Indicator variable equals to 1 if the perpetrator is the CEO, COO or the president of the fraudulent firm, and 0 otherwise.	IFP dataset
CV–Control Variables		
Firm Size (FIRM_SIZE)	Natural logarithm of total assets reported in the year prior to the first misreported year or the year prior to that in cases where data was missing.	Compustat dataset
Audit Tenure (AUDIT_TENURE)	The number of consecutive years an auditor audited the same client until the last year of the fraud duration.	Audit Analytics dataset
Going Concern (GC)	Indicator variable equals to 1 if the auditor issued a going concern, and 0 otherwise.	Audit Analytics dataset
Auditor Type (BIG-N)	Indicator variable equals to 1 if the auditor is one of the Big 4 firms, i.e. PricewaterhouseCoopers LLP, Ernst & Young LLP, KPMG LLP and Deloitte & Touche LLP, or Arthur Andersen LLP, and 0 otherwise	Audit Analytics dataset
Sarbanes-Oxley Act (SOX)	Indicator variable, where it equals 1 if the fraud scheme terminated after 2002, and 0 otherwise.	Dechow dataset

Table 1: Studies Examining SEC Enforcements Against the Independent Auditor

STUDY	DV *(1=Aud. Charged; 0 = Otherwise)*	IV	CV	SAMPLE	SAMPLE PERIOD	OBSERVED ASSOCIATION
Kedia, Khan and Rajgopal (2017)	Auditor_Named	Big N *(Binary Variable: 1 = Big N auditor; 0 = Otherwise)*	Post SOX; Severity Violation: VIOLENGTH, TARGET_LIT, TARGET_RESTATE, TARGET_COURT; Firm Characteristics: SIZE, SALES/AT, CA/CL, DEBT/AT, NI/AT.	533 SEC enforcements; 93 cases included enforcement against auditors.	1996 - 2009	SEC is less likely to name a Big N auditor as a defendant, and to impose harsh penalties on them. Overall, SEC relies more on administrative proceedings than tougher civil proceedings, against auditors.
Eutsler, Nickell and Robb (2016)	AUDAAER	GCO (Binary *Variable: 1 = auditor issued a GC opinion; 0 = otherwise)*	Firm Characteristics: Size, Bankruptcy, FOREIGN, ZSCORE, REC_INV, INDTECH, INDFIN, INDUTIL; Fraud Characteristics: FRUADTEN, REVENUE; DISCLOSE, MISSTATE; Auditor Characteristics: BIGN, AUDTEN.	314 fraud cases; 54 included enforcement against auditor; 34 included a GC; 12 included both an enforcement against the auditor and a GC.	1995 - 2012	GC report modification accompanying the last set of fraudulently stated financials are associated with a greater likelihood of enforcement action against the auditor. Auditors may be penalized for documenting their awareness of fraud risk when FS are later determined to be fraudulent.
Rollins and Bremser (1997)	SEC_DIS	AUD_CLASS: auditor's size; DIV *(Binary Variable: 1 = auditor is AICPA; 0 = otherwise)*	Violation Type: FALSIFY, AR_OVER, DISCL.	91 enforcement cases; 33 cases included enforcement against the auditor.	1982 -1991	Larger auditors and auditors who were members of the AICPA Division for CPA Firms had a lower likelihood of SEC sanctions. Also, disclosure violation increased the likelihood

Table 2: Final Sample Selection

	Misreporting Firms
Institute for Fraud Prevention Dataset (IFP Dataset)	705
AAER Dataset (Dechow Dataset)	1,019
Merged IFP and Dechow Dataset	**761**
Missing CIK number	129
Missing data perpetrator data	87
Missing fraud amount data	135
Missing control variable data	214
Final Sample	**196**

Table 3: Descriptive Statistics for Full Sample and by SEC's Auditor-Related Findings

Panel A: Full Sample–Descriptive Statistics

	Full Sample (n = 196)				
Variables	**Freq.**	**Mean**	**Min.**	**Max.**	**Std. Dev.**
FR_DURATION		11.7	1.0	56.0	10.5
FR_AMOUNT		17.5	12.6	23.1	2.3
COLLUSION		1.6	0.0	3.0	0.9
FIRM_SIZE		6.7	0.0	14.7	2.7
AUDIT_TENURE		3.0	1.0	14.0	2.2
	Obs.	**%**			
FR_TYPE:					
REVfraud	122	62.2			
Non-REVfraud	74	37.8			
AMfraud	49	25.0			
Non-AMfraud	147	75.0			
DISCfraud	74	37.8			
Non-DISCfruad	122	62.2			
PERP_POSITION					
Top_Exe.	127	64.8			
Non-Top_Exe.	69	35.2			
GC					
Yes	31	15.8			
No	165	84.2			
BIG-N					
Big-N	154	78.6			
Non_Big-N	42	21.4			
SOX					
Before	106	54.1			
After	90	45.9			

Panel B: SEC_Auditor Outcome Sample–Descriptive Statistics

	SEC_Auditor Outcome														
	Charged (n = 29)					Silent (n = 45)					Concealed (n = 122)				
Variables	**Freq.**	**Mean**	**Min.**	**Max.**	**Std. Dev.**	**Freq.**	**Mean**	**Min.**	**Max.**	**Std. Dev.**	**Freq.**	**Mean**	**Min.**	**Max.**	**Std. Dev.**
FR_DURATION		11.7	1.0	31.0	7.2		13.6	1.0	51.0	11.5		11.1	1.0	56.0	10.8
FR_AMOUNT		17.7	12.6	21.8	2.4		17.8	13.6	23.1	2.4		17.3	13.3	22.9	2.2
COLLUSION		1.9	0.0	3.0	0.8		1.1	0.0	3.0	0.9		1.8	0.0	3.0	0.9
FIRM_SIZE		6.1	0.0	13.4	3.1		8.0	2.8	13.8	2.8		6.4	1.4	14.7	2.4
AUDIT_TENURE		2.8	1.0	8.0	2.0		3.3	1.0	9.0	2.3		2.9	1.0	14.0	2.3
	Obs.	**%**				**Obs.**	**%**				**Obs.**	**%**			
FR_TYPE:															
REVfraud	18	62.1				25	55.6				79	64.8			
Non-REVfraud	11	37.9				20	44.4				43	35.2			
AMfraud	11	37.9				9	20.0				29	23.8			
Non-AMfraud	18	62.1				36	80.0				93	76.2			
DISCfraud	12	41.4				17	37.8				45	36.9			
Non-DISCfruad	17	58.6				28	62.2				77	63.1			
PERP_POSITION															
Top Exe.	21	72.4				24	53.3				82	67.2			
Non-Top Exe.	8	27.6				21	46.7				40	32.8			
GC															
Yes	4	13.8				5	11.1				22	18.0			
No	25	86.2				40	88.9				100	82.0			
BIG-N															
Big-N	16	55.2				41	91.1				97	79.5			
Non Big-N	13	44.8				4	8.9				25	20.5			
SOX															
Before	18	62.1				19	42.2				69	56.6			
After	11	37.9				26	57.8				53	43.4			

Variable Definitions:

FR_DURATION = the number of quarterly financial statements misreported by the fraudulent firm;
FR_AMOUNT = natural logarithm of the total misreported amount or total misappropriated assets;
COLLUSION = number of perpetrators involved in the fraud scheme;
FR_TYPE = three separate indicator variable equal to 1 if the fraud scheme involved misreporting of revues, assets or fail to disclose relevant information in the financial statements, and 0 otherwise.
PERP_POSITION = indicator variable where it is equal to 1 if the perpetrator is the CEO, COO or the president of the fraudulent firm and 0 otherwise.
FIRM_SIZE = natural logarithm of total assets reported in the year prior to the first misreported year or the year prior to that in cases where data was missing.
AUDIT_TENURE = the number of consecutive years an auditor audited the same client until the last year of the fraud duration.
GC = indicator variable, where it equals 1 if the auditor issued a going concern in the audit report, and 0 otherwise.
BIG-N = indicator variable, where it equals 1 if independent auditor is part of the Big 4 firms, i.e., PricewaterhouseCoopers LLP, Ernst and Young LLP, KPMG LLP and Deloitte and Touche LLP, and also Arthur Andersen LLP, and 0 otherwise
SOX = indicator variable, where it equals 1 the fraud scheme ended after the issuance of SOX, and 0 otherwise.

Table 4: Pearson Correlation Coefficients

(n = 196)

	1	2	3	4	5	6	7	8	9	10	11	12		
1													**1** =	FR_DURATION
2	0.38**												**2** =	FR_AMOUNT
3	0.06	0.05											**3** =	COLLUSION
4	0.24**	-0.01	-0.06										**4** =	REV*Fraud*
5	-0.01	-0.07	-0.13	-0.26**									**5** =	AM*Fraud*
6	-0.09	-0.18*	-0.11	-0.15*	0.06								**6** =	DISC*fraud*
7	-0.14	-0.11	-0.75**	0.13	0.10	0.09							**7** =	PERP_ POSITION
8	0.25**	0.69**	-0.11	0.19**	-0.07	-0.18**	0.05						**8** =	FIRM_SIZE
9	0.40**	0.19**	-0.21**	0.21**	-0.07	-0.08	0.11	0.32**					**9** =	AUDIT_TENURE
10	0.20**	0.24**	-0.05	-0.07	0.04	-0.05	0.03	0.36**	0.05				**10** =	GC
11	-0.08	-0.25**	0.21**	-0.05	0.01	0.12	-0.23**	-0.52**	-0.25**	-0.22**			**11** =	BIG-N
12	-0.40**	-0.13	0.17*	-0.19**	0.08	-0.06	-0.03	-0.19**	-0.57**	-0.06	0.06		**12** =	SOX

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Variables are defined in Table 3 and Appendix A.

Table 5: Multinomial Logit Regression - SEC's Auditor-Related Findings and Fraud Characteristics
(n = 196)

	Silent[a]					Concealed[a]				
Variables	**B[b]**	**SE[c]**	**OR[d]**	**95% CI[e]**		**B[b]**	**SE[c]**	**OR[d]**	**95% CI[e]**	
Intercept	5.21	2.58				3.38	2.03			
Fraud Severity										
FR_DURATION	0.04	0.03	1.04	[0.98,	1.11]	0.00	0.03	1.00	[0.95,	1.06]
FR_AMOUNT	-0.47	0.19	0.63**	[0.43,	0.91]	-0.21	0.15	0.81	[0.61,	1.09]
COLLUSION	-1.60	0.50	0.20***	[0.08,	0.54]	-0.04	0.39	0.96	[0.44,	2.07]
FR_TYPE										
REV*fraud*[f]	0.16	0.67	1.17	[0.32,	4.35]	0.20	0.55	1.23	[0.42,	3.61]
Am*fraud*[g]	-1.01	0.65	0.37	[0.10,	1.31]	-0.79	0.49	0.46	[0.17,	1.19]
DISC*fraud*[h]	-0.05	0.58	0.95	[0.31,	2.98]	-0.15	0.48	0.86	[0.34,	2.18]
PERP_POSITION (Top_Exe.)[f]	1.87	0.92	6.47**	[1.06,	39.41]	0.39	0.77	1.48	[0.32,	6.73]
Control Variables										
FIRM_SIZE	0.45	0.18	1.57**	[1.10,	2.25]	0.06	0.15	1.06	[0.78,	1.43]
AUDIT_TENURE	-0.28	0.16	0.76*	[0.56,	1.03]	-0.07	0.13	0.93	[0.72,	1.21]
GC[j]	1.08	0.91	2.96	[0.50,	17.46]	0.80	0.73	2.22	[0.54,	9.22]
BIG-N[k]	1.97	0.85	7.16**	[1.34,	38.21]	1.66	0.61	5.26***	[1.58,	17.56]
SOX[l]	0.89	0.70	2.43	[0.61,	9.65]	0.50	0.58	1.66	[0.53,	5.13]

Model Fit:

Baseline log-likelihood	358.9
Model log-likelihood	297.6
Model $\chi 2$ (24 df)	61.4***
Pseudo R2 (Nagelkerke)	32%

a. The reference category is charged.
b. Regression Coefficient.
c. Standard Error
d. Odds Ratio
e. Confidence Interval
f. Reference category is non-revenue fraud.
g. Reference category is non-asset missappropriation fraud.
h. Reference category is non-disclosure fraud.
i. Reference category is non-top executive perpetrator.
j. Reference category is the GC was not issued.
k. Reference category is the auditor is not a Big-N auditor.
l. Reference category is before issuance of SOX.