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**AN INVESTIGATION OF INTERNAL CONTROL RELATED FRAUDS  
AND AUDITOR LITIGATION: PRE- AND POST- SARBANES-OXLEY,  
SECTION 404**

A dissertation submitted in partial fulfillment of the requirements for the degree of  
Doctor of Philosophy in Business at Virginia Commonwealth University.

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## **ABSTRACT**

### **AN INVESTIGATION OF INTERNAL CONTROL RELATED FRAUDS AND AUDITOR LITIGATION: PRE- AND POST- SARBANES-OXLEY, SECTION 404**

Ifeoma A. Udeh, Ph.D.

A dissertation submitted in partial fulfillment of the requirements for the degree of  
Doctor of Philosophy in Business at Virginia Commonwealth University.

Virginia Commonwealth University, 2012

Director: Ruth W. Epps, Ph.D.  
Professor, Accounting

Using 629 observations of U.S. publicly listed firms with internal control related frauds from 2000 to 2006; this study investigates the change in auditor litigations in the Post- Sarbanes Oxley, Section 404 period. To the extent the conditions of the internal control in place are inadequate or non-existent, the possibility of the occurrence of internal control related fraud heightens. Thus, the inability of auditors to detect a financial statement misstatement due to internal control fraud in a timely manner exposes auditors to litigation (Barra, 2010; Heninger,

2001; Caplan, 1999). This situation was prevalent in the recent notable corporate failures that resulted in auditors being named as potential defendants.

The present research finding indicates during the Post-SOX 404 period, the probability of auditor litigation due to internal control fraud increases. However, no support was shown for further increases in the likelihood of auditor litigation when both types of fraud occur in the Post-SOX 404 period. These results suggest an increase in the enforcement of accountability by the SEC, and should motivate auditors towards reassessing their audit procedures. Furthermore, the results indicate the probability of auditor litigation due to internal control fraud decreases for accelerated filers, and similarly, the probability of auditor litigation decreases for firms with management voluntary disclosures reflecting effective internal control.

The overall result of this study indicates the likelihood of auditors being litigated increased in the Post-SOX 404 period, and auditors are more likely to be litigated when both types of fraud occurs simultaneously. This result further supports the argument for meritorious claims and the procedural justice theory.



## I Introduction

The enactment of Sarbanes Oxley (SOX) Act of 2002 was a defining moment in the history of the accounting profession. SOX 2002 was enacted “to protect investors by improving the accuracy and reliability of corporate disclosures made pursuant to the securities laws, and for other purposes.”<sup>1</sup> One of the key requirements to achieve the purpose of SOX 2002 is stated in Section 404 – Management Assessment of Internal Controls. Section 404(a) of SOX requires the SEC to prescribe rules requiring that each annual report filed with the SEC under the 1934 *Securities Exchange Act* shall “contain an internal control report, which shall-

(1) state the responsibility of management for establishing and maintaining an adequate internal control structure and procedures for financial reporting; and

(2) contain an assessment, as of the end of the most recent fiscal year of the issuer, of the effectiveness of the internal control structure and procedures of the issuer for financial reporting” (US Congress, 107 H.R. 3763).

In addition, Section 404(b) specifies,

“With respect to the internal control assessment required by subsection (a), each registered public accounting firm that prepares or issues the audit report for the issuer shall attest to, and report on, the assessment made by the management of the issuer” (US Congress, 107 H.R. 3763).

Regulators and standard setters have issued various pronouncements with respect to internal controls. The fundamental of an internal control system was first broadly discussed in

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<sup>1</sup> One hundred seventh congress of the United States of America, at the second session begun and held on the twenty-third day of January, two thousand and two.

the 1992 Committee of Sponsoring Organizations (COSO) Report: Internal Control – An Integrated Framework. The COSO internal control framework consists of five interrelated components. These are: (1) control environment, (2) risk assessment, (3) control activities, (4) information and communication, and (5) monitoring (AICPA, 2004). In 2007, the Public Company Accounting Oversight Board (PCAOB) noted in the Auditing Standard No. 5 (*An Audit of Internal Control Over Financial Reporting That Is Integrated with An Audit of Financial Statements*) that the internal control over financial reporting has inherent limitations.

According to the PCAOB, internal control over financial reporting is a process that involves human diligence and compliance and is subject to lapses in judgment, breakdowns resulting from human failures, circumvention by collusion or improper management override. In view of this, the PCAOB requires auditors to consider whether a firm's internal controls sufficiently address risk of material misstatement due to fraud and risk of management override of other controls. Similarly, the America Institute of Certified Public Accountants (AICPA) in Statement of Auditing Standard No. 99 (Consideration of Fraud in a Financial Statement Audit), states "the auditor's interest specifically relates to acts which result in material misstatement of the financial statements." Thus, internal control related frauds are expected to give rise to auditor litigations.

Dye (1993) identifies the violation of the Generally Accepted Accounting Principles (GAAP) and the violation of the Generally Accepted Auditing Standards (GAAS) as the two broad bases under which claims are brought against external auditors. The claims are based upon gross negligence (Schwartz 1998, Dye 1993). GAAP is the framework for financial accounting, and it includes standards, rules, and conventions that should be followed in recording transactions and in preparing financial statements. GAAS are standards against which the quality

of audits is assessed. GAAS includes ten auditing standards grouped as either general standards, standards of fieldwork or standards of reporting. The focuses of these ten standards are closely related to the requirements of Sarbanes Oxley, 2002, Section 404, to the extent they address the auditor's responsibility in relation to issues such as due professional care, internal control, and disclosures.

Furthermore, the recent events that plagued the accounting profession, involving the now Big 4 and the then Big 5 audit firms and companies such as Enron, WorldCom and Tyco, raise concerns about the role of auditors and auditing procedures. Prior literature has suggested a rise in auditor litigation in periods of instability (Palmrose, 1987). These notable failures in the corporate environment which were mostly attributable to lack of due professional care would have been prevented or at least detected and corrected timely. In these recent corporate failures, auditors were named as potential defendants due to the nature of their role in evaluating the "substance over form" characteristics of transactions and events, and their role in determining if such transactions and events are reasonable, fairly recorded, and properly disclosed.

Obtaining an understanding of the nature of transactions including the basis for any assumptions made about the transaction is one of the fundamentals of designing an audit procedure. If an auditor's understanding of a transaction and the elements of the transaction are flawed, then the auditor will be unable to evaluate appropriately the necessary internal controls related to the transaction nor will the auditor be able to give a reasonable opinion as to whether the transaction is valid, verifiable, and performed under an internal control system that operates effectively.

Prior literatures suggest an inverse relation between fraud and internal control (Barra, 2010; Heninger, 2001; Caplan, 1999). When fraud occurs, it implies an opportunity existed, and

the opportunity was taken advantage of by the perpetrator(s). The opportunity can be the result of the absence of internal controls, the ineffectiveness of internal control, or through management override of internal controls. The interaction between the absence of internal control or the lapse in internal control, and the occurrence of a fraudulent act that results in material financial statement misstatement is the focus of interest in this study. As such, this study defines internal control related fraud as an intentional act which results in a material misstatement in financial statements under audit, when internal controls are nonexistent or ineffective.<sup>2</sup>

The auditor has the responsibility to plan (including obtaining an understanding of the internal controls in place in the organization) and perform an audit to obtain reasonable assurance about whether the financial statements are free of material misstatements, whether due to fraud or error (SAS 99). A material misstatement may not be detected due to the nature of the audit evidence obtained, the nature of the fraud, and nature of audit procedures performed. An audit failure resulting from any of the above exposes the auditor to potential litigation. Bonner et al. (1998), show an increased likelihood of auditors' litigation when frauds are either of a common nature (fraud types that occur frequently) or when the fraud relates to fictitious transactions.

Auditing standards have long recognized the significance of internal control in auditing, since weak internal controls over financial reporting may result in less reliable financial information. However, auditors had the option of not relying on internal controls, but rather

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<sup>2</sup> Example of auditor litigation due from internal control related fraud: SEC vs. Frank S. Laforgia, CPA (AAER No. 3027, July 31, 2009). The proceedings relate to improper professional conduct of audits and reviews for the years ended December 31, 2002, December 31, 2003, and the first three quarters of 2004. Unqualified audit and review reports were issued despite the fact that Certified Services, Inc.'s financial statements were not presented in accordance with GAAP. Certified Services, Inc.'s financial condition were artificially and materially inflated through bogus letters of credit recorded as assets and through the omission of material liabilities [Accessed: November 27, 2010].

relying solely on the results from substantive tests. Thus, prior to SOX 2002, the only required audit procedure related to internal controls was auditors had to obtain an understanding of clients' internal controls. Tests of internal controls were necessary only if the auditor decided to rely on the internal controls. SOX changed the requirements related to internal controls, and require auditors to attest to the effectiveness of internal controls and to evaluate management's assertion about the effectiveness of internal controls. Hence, it is likely the audit approaches for audit engagements would be substantially different in the post-SOX period than in the pre-SOX period (Raghunandan & Rama, 2005). Further, an increase is expected in auditor litigation due to internal control related fraud in the post SOX 2002, Section 404 period because of: (1) the level of attention given to SOX 2002 by the regulators, management of publicly listed firms, auditors (both external and internal), academics and, (2) the requirements of SOX 2002 which suggest additional audit procedures.

Using a sample of U.S. publicly listed firms with internal control related frauds; this study investigates the change in auditor litigations, and the association between auditor litigations and internal control related fraud, during the period 2000 to 2006. In environments where adequate internal controls are designed, implemented, and are operating effectively, internal control related fraud can be prevented, or detected and corrected on a timely basis, during the normal course of activities. If the conditions of the internal control are inadequate or non-existent, then the possibility of the occurrence of internal control related fraud heightens. Thus, an auditor's failure to detect a material financial statement misstatement due to internal control related fraud in a timely manner exposes the auditor to litigation (Barra, 2010; Heninger, 2001; Caplan, 1999).

This study focuses on the enactment of Sarbanes Oxley Act of 2002, Section 404 which became effective November 15, 2004. Data of firms that experienced internal control related fraud was obtained from Accounting and Auditing Enforcement Releases (AAERs) for the years 2000 through 2006. In general, this study investigates the change in auditor litigation due to internal control fraud in the post- SOX 404 period.

An investigation of the change in auditor litigation due to internal control related fraud is important because it indicates how consistently organizations and auditors adhere to the requirements of SOX 2002, Section 404, especially since SOX 2002 focuses on the needs of the primary financial report users – the investors, and aims to encourage transparency, timeliness, and reliability in financial reporting. Instances of auditor litigation due to internal control related fraud indicate management may not have adequate internal controls in place, or the auditors may not have exercised due diligence in performing auditing functions. The extent to which regulators and stakeholders do not bring legal actions against management and auditors, when stakeholders detrimentally rely on materially misstated financial report, is an indication of the level of importance attached to accountability, which is emphasized in Sarbanes-Oxley Act of 2002.

The results of this study may be informative to law-makers as they seek to address the ills that affect the economic sector as a whole and deter undue business practices. To the extent that investors and the business world perceive value in government's decisions and involvement in the business world, policy makers may be faced with less opposition when making enactments which they presume will encourage good business practices, deter fraudulent practices and possibly enhance the economic well-being of the nation. Regulators may find it useful since it may assist in evaluating the effect of SOX 2002, Section 404 on the accounting profession,

especially since the Sarbanes-Oxley Act of 2002 amongst other things mandated certain reforms focused on enhancing corporate responsibilities, financial disclosures, and deterring fraud. Moreover, the increased emphasis on internal controls by regulatory agencies, by those charged with governance in corporations, and in audit procedures used by public accountants are due in part to SOX 2002 (Doyle et al., 2007; Blay, 2005; Ge & McVay, 2005).

External auditors may find this study helpful because the study communicates the need for adequate attention to fraud and hence, the need to exercise professional skepticism in considering the risk of material misstatement due to fraud, especially since users of the financial reports may have a different perception of what the auditors' responsibilities are with respect to fraud. Hence, a perceived failure to meet the expectation of stakeholders as it relates to fair financial reporting and disclosure is expected to result in auditor litigations. McEnroe and Martens (2001) found in their survey of public accountants and individual investors, to determine the perception of the extent of expectation gap existence in attest functions, that there exists an expectation gap between auditors' responsibilities and stakeholders' perception of what auditors' responsibility is. They suggest the expectation gap may explain the reason why some stakeholders expect auditors to act as "public watch dogs," which implies that auditors are expected to have the public interest as a key objective, as opposed to being an advocate of the client.

This study contributes to the literature on Sarbanes Oxley Act of 2002 by investigating the change in auditor litigation due from internal control related fraud. While prior studies have shown a significant change in accounting practice since the enactment of SOX 2002, the literature provides limited information on how SOX 2002 affected auditor litigation. This study investigates internal control related fraud to determine how auditor litigation may have changed

due to SOX 2002, Section 404 because Section 404 states the responsibilities of management and auditors with respect to internal control and financial reporting. Though prior studies have indicated that auditors consider internal control and risk (including litigation risk, fraud risk and significant risk) in their decisions and audit procedures (Hwang & Chang, 2010; Pratt & Stice, 1994), very little prior research have investigated the effect of SOX 2002 Section 404 on auditor litigation due internal control related fraud.

Further, unlike prior studies that used the theoretical framework of attribution theory (Reffett 2007, Bonner et al. 1998), this study also uses a complementary theory, procedural justice theory. In addition, the 1992 COSO internal control framework and the 2007 PCAOB internal control regulations are used in framing the theoretical structure of this study. The use of both theories and the existing regulations as the framework to investigate auditor litigation is a theoretical contribution to research in auditor litigation. In addition, this study is relevant since fraud continues to be of mainstream interest considering the recent accounting scandals including Lehman Brothers, the extent of regulatory involvement, the depth of media coverage, the economic impact on both Wall Street and Main Street, and the growth in forensic accounting as a sub-area in the field of accounting (Barra, 2010; Dye, 1993).

The remainder of this study is organized as follows. Chapter 2 reviews the literature addressing internal control related fraud, Sarbanes Oxley Act and auditor litigation. Also, in chapter 2, the theoretical framework of the study is discussed and the hypotheses are presented. Chapter 3 describes the methodology, empirical models, and data sources that are used in the investigation. Chapter 4 presents the results of the analysis and the implications of the results. Chapter 5 concludes the study and identifies the limitations of the study as well as potential future research areas.



## II Literature Review and Hypotheses

### ***Background***

Several streams of research are primarily relevant to this study. The first stream of research has examined internal control and frauds. These studies have generally demonstrated that the quality of firms' internal control is related to the occurrence of fraud. The second stream of research relates to auditor litigation. Generally these studies have provided empirical evidence about auditors' evaluation of audit risk, which includes litigation risk, and auditors' response to the assessed risks, especially as it relates to litigation. The third stream of research relevant to this study relates to the Sarbanes Oxley Act of 2002 (SOX). These studies examine the effect of the Sarbanes Oxley Act on various facets of accounting and auditing, and they provide insight into the requirements of SOX especially as it relates to management's responsibility and auditors' responsibility. The streams of research mentioned above are discussed in detail below following the discussion on the theoretical framework.

### ***Theoretical Framework***

Attribution theory is a social psychology theory concerned with how people interpret events and behaviors, and how people ascribe causes to the events and behaviors. Research using attribution theory examines the use of information in the social environment to explain events and behaviors (Schroth & Shah, 2000). According to Reffett (2007), "when evaluators believe

comparable persons would have acted differently in a given circumstance, evaluators tend to attribute responsibility for an outcome to the person. Conversely, when evaluators believe comparable persons would have acted similarly, evaluators tend to attribute responsibility for the outcome to the situation.” The former refers to internal or dispositional attributions, while the latter refers to external or situational attributions (Wilks and Zimbelman, 2004).

Prior literature (Wilks and Zimbelman, 2004; Schroth & Shah, 2000; Adler 1980) has shown people are inclined to attribute others’ behavior to dispositional tendencies and to attribute their own behavior to situational circumstances. This is often true, when the observed behavior is negative, similar to fraud. Thus, evaluators are expected to infer the failure to detect internal control related fraud as a dispositional tendency on the auditor’s part. In other words, the auditors were negligent. Bonner et al. (1998) found that auditors were more likely to be sued when they fail to detect common frauds, and the evaluators believed that the fraud would have been detected by other auditors.

Reffett’s (2007) study related to auditor’s accountability for detecting fraud extended Bonner et. al (1998). Reffett predicted that auditors are more likely to be held accountable by evaluators when the auditors fail to detect fraud after they had identified the fraud occurrence as a fraud risk. The result of Reffett’s study shows an increase in auditors’ liability when an audit fails, after the auditors had identified the perpetrated fraud as a fraud risk and performed procedures to investigate the identified fraud risk. The findings support Reffett’s prediction.

Auditors are required by Sarbanes-Oxley Act Section 404 to report on the effectiveness of firms’ internal control. As such, auditors are expected to gain an understanding of the internal controls in place, assess the design and implementation of the internal controls and test the operating effectiveness of the internal controls, as deemed necessary for the auditors’ reliance

and possibly scaling back of other substantive audit procedures. These processes can be interpreted by evaluators as a basis to determine negligence, if auditors fail to detect internal control related fraud, which has occurred.

The procedures used in the evaluation of a legal situation suggest the value perception of one group about another. Procedural justice theory is a social psychology theory concerned with decision making process and the impact of the process on social relationship. The theory focuses on what constitutes fair decision procedures, and is the basis for the practice of decision-makers to use and apply laws or criteria that they believe are fair, just, and relevant to the decision making process (Buckless & Peace, 1993).

The value perception may convey positive or negative signals to the group under scrutiny. These positive or negative signals occur irrespective of the direction of the legal case (Schroth & Shah, 2000). Thus, external attribution occurs, if an auditor perceives the procedures as being unfair, and their litigation as negative. Also, there is an indication of external attribution when the procedures are perceived as being unfair, and being litigated as positive. On the other hand, an internal attribution is observed when an auditor sees the procedures as being fair, and their being litigated as positive. Finally, an internal attribution is indicated when an auditor sees the procedures as being fair, and their being litigated as negative.

Using prior research findings as an indicator, it is expected in a case of an alleged failed audit, auditors are more likely to be sued. Regulators and investors will most likely be inclined to attribute the cause of the alleged failed audit to negligence on the part of the auditors, especially since auditors are mostly sued for meritorious claims (Fureman, 1999), which suggests fair procedures are followed.

### ***Internal controls and fraud***

The Public Company Accounting Oversight Board (PCAOB) defines internal control over financial reporting in Auditing Standard No. 5 (2007) (*An Audit of Internal Control Over Financial Reporting That Is Integrated with An Audit of Financial Statements*) as a process designed by, or under the supervision of, the company's principal executive and principal financial officers, or persons performing similar functions, and effected by the company's board of directors, management, and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles (GAAP) and includes those policies and procedures that –

- (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company;
- (2) provide reasonable assurance transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and
- (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

The PCAOB noted internal control over financial reporting is a process that involves human diligence and compliance and is subject to lapses in judgment and breakdowns resulting from human failures. Further, the PCAOB noted internal control over financial reporting can be circumvented by collusion or improper management override. Hence, internal control over financial reporting has inherent limitations. As a result of these inherent limitations, there is the

risk that material misstatements will not be prevented or detected and corrected on a timely basis by internal control over financial reporting.

Since, these inherent limitations are known features of the financial reporting process, it is possible to design the process to include safeguards to reduce, though not eliminate, inherent risk. Thus, auditors are required to consider whether a firm's internal controls sufficiently address risk of material misstatement due to fraud and risk of management override of other controls. This study relates to the risk of material misstatement due to fraud and examines the change in auditor litigation due to internal control fraud.

The 1992 Committee of Sponsoring Organizations (COSO) Report: Internal Control – An Integrated Framework identified the fundamental and essential objectives of any business or entity as: (1) economy and efficiency of operations, including safeguarding of assets and achievement of desired outcomes; (2) reliability of financial and management reports; and (3) compliance with laws and regulations (AICPA, 2004). The Committee of Sponsoring Organizations' (COSO) internal control framework provided guidance on critical aspects of organizational governance and internal control. The COSO internal control framework consists of five interrelated components. These five components are: (1) control environment, (2) risk assessment, (3) control activities, (4) information and communication, and (5) monitoring. All the components except control activities operate at the entity level. COSO defines these components as below:

*“Control environment sets the tone of an organization, influencing the control consciousness of its people. It is the foundation for all other components of internal control, providing discipline and structure.*

*Risk assessment is the entity's identification and analysis of relevant risks to achievement of its objectives, forming a basis for determining how the risks should be managed.*

*Control activities are the policies and procedures that help ensure that management directives are carried out.*

*Information and communication systems support the identification, capture, and exchange of information in a form and time frame that enable people to carry out their responsibilities.*

*Monitoring is a process that assesses the quality of internal control performance over time.” (AICPA, 2004)*

Prior studies have recognized internal control over financial reporting as an important element of a firm’s structure and much attention has been given to internal controls by regulators, standard-setters, management and auditors, since the recent events that plagued the accounting profession. Research on internal control and fraud has focused on the nature of firms that motivate fraud occurrences and the implications of fraud occurrences for auditors. Discussions of these prior studies on the nature of firms most likely to experience fraud and the fraud types are presented below.

#### Nature of firms

Every firm is susceptible to fraud because every fraud involves humans. However, certain characteristics may make a firm more vulnerable to fraud than another firm without those characteristics. Prior literature has investigated these characteristics that make firms vulnerable to fraud by studying fraud and non-fraud firms and determining what they have in common and what may be peculiar to each group. Ziegenfuss (1996) in a survey with 145 respondents identified the following as the reasons for increased fraud: (1) poor management practices, (2) economic pressure, (3) weakened societal values, (4) people not held responsible for actions, (5) inadequate training for those responsible for fraud prevention /detection, (6) more sophisticated criminals, (7) advances in computer technology, (8) increased workloads, (9) ineffective justice

system (10) reduction of middle management (11) other, and (12) lack of government intervention.

With respect to the control environment, firms that have well established structures and the proper tone at the top are less vulnerable to fraud. This argument is supported by literature such as Abbott (2000) and Bell & Carcello (2000). Abbott investigated whether audit committee activity and independence is inversely related to fraudulent financial statements, using 156 firms subject to SEC Accounting and Auditing Enforcements Releases (AAERs) between 1980 and 1986. In the study, Abbott substituted the variable audit committee presence used in earlier studies with audit committee activity and independence, since the earlier studies reported mixed results about the association of audit committee and likelihood of fraud. Abbott (2000) results indicate that firms with independent directors and with the minimum activity level are less likely to be associated with fraudulent financial statements.

Bell & Carcello (2000) used a sample of 77 fraud and 305 non-fraud engagements to examine the probability of fraudulent financial reporting conditioned on the presence or absence of 46 fraud risk factors. Bell & Carcello (2000), in addition to identifying specifically weak control environment as a factor that increases the probability of financial reporting fraud, also identified the following factors as being effective in discriminating fraudulent financial reporting: (1) rapid growth, (2) management's overly concern with meeting projected earnings, (3) overly evasive management, (4) ownership status, and (5) interaction between weak control environment and aggressive financial reporting attitude.

Doyle et al. (2007) narrowed their research focus to material weaknesses, which is the most extreme category of flaws possible in an internal control system. The other two categories are significant deficiencies and deficiencies (Auditing Standard No. 5). The results reported by

Doyle et al. in their examination of 779 firms that disclosed material weakness from August 2002 to 2005 are very similar to the results reported by Bell & Carcello (2000). Doyle et al. (2007) found the firms that disclosed material weaknesses: (1) were smaller in size, (2) experienced financial difficulties and were thus less profitable, (3) had more complex structures, (4) experienced rapid growth, or (5) were undergoing some form of restructuring. According to Doyle et al., the characteristics of these firms were consistent with firms that have difficulties with financial reporting controls, lacked resources, had complex accounting issues and exist in a rapidly changing business environment.

The aforementioned studies have more or less identified control environment as being important. Unlike the previous studies mentioned, which examined the control environment, Barra (2010) focused on control activities and monitoring. Barra used an analytical approach to investigate the effect of penalties and other internal controls on employees' propensity to be fraudulent. Barra used both managerial and non-managerial employees, and found the presence of the control activities, separation of duties, increases the cost of committing fraud. This implies that the benefit from committing fraud has to outweigh the cost in an environment of segregated duties for an employee to commit fraud. Further, Barra found segregation of duties is a 'least-cost' fraud deterrent for non-managerial employees, but for managerial employees, maximum penalties are the 'least-cost' fraud disincentives. The results suggest the effectiveness of preventive controls (*control activities*) such as segregation of duties is dependent on detective controls (*monitoring*).

In general, prior studies suggest an ineffective internal control system is a key feature in fraud firms. Therefore, this study argues that the responsibility for the outcome of internal control related frauds are more likely to be attributed to a person (e.g. auditors) than to a



situation since evaluators would most likely believe that comparable persons would have acted differently given the circumstances.

#### Effect on auditors

Literature has shown there is an association between internal control and fraud. The attribution theory has suggested that when fraud occurs, identified parties are held accountable. Auditors by reason of their role as “public watch dogs” (McEnroe and Martens, 2001) are most likely to be held accountable if evaluators determine substandard audit services were provided (Bonner et al., 1998; Reffett, 2007).

Using a sample of 261 firms subject to SEC enforcement actions between 1982 and 1995, Bonner et al. (1998) investigate whether the likelihood of auditor litigation increased with certain types of financial reporting frauds. Bonner et al. developed a fraud taxonomy which includes the following categories: (a) fictitious revenues, (b) premature revenue recognition, (c) misclassifications, (d) fictitious assets and/ or reductions of expenses/liabilities, (e) overvalued assets and undervalued expenses/ liabilities, (f) omitted or undervalued liabilities (affecting expenses or assets), (g) omitted or improper disclosures, (h) equity frauds, (i) related party transactions, (j) frauds going the “wrong way” (those understating income and / or assets), (k) illegal acts, and (l) miscellaneous (including consolidation issues). Bonner et al. investigated the independent variables – frequent fraud and fictitious transaction frauds. They found there is more likelihood of auditor litigation due to frequent frauds than fictitious transaction frauds.

Similarly, the results of two experiments reported by Reffett (2007) support the notion that auditors are possible parties to be held accountable in instances of internal control fraud. Reffett (2007) conducted two experiments using a total of 280 non-accounting major undergraduate students as participants to investigate the likelihood of auditors being held

responsible to detect fraud under three conditions of a perpetrated fraud: (1) fraud risk not identified and no targeted audit procedures performed, (2) fraud risk identified and no targeted audit procedures, and (3) fraud risk identified and targeted audit procedures performed. The results of both experiments indicate that auditors in the first condition were less likely to be held liable for losses, while auditors in the third condition were most likely to be held liable for losses. The results were consistent with attribution and norm theory which Reffett used in developing the theoretical framework of the study. The results reported suggest a possible increase in auditor's liability when fraud risks are identified and can be easily investigated versus when fraud risks are more difficult to investigate.

Further, Johnson & Rudesill (2001), through a survey of 171 accountants to determine within the context of small businesses, the issues of fraud, fraud prevention and detection procedures used, and the perceived impact of SAS No. 82, *Consideration of Fraud in a Financial Statement Audit*, found the majority of respondents believe management is responsible for fraud prevention, and an auditor's responsibility entails assessing fraud risk and designing the audit procedures accordingly. Also, majority of the respondents believe the frequency of occurrence of fraud depends on the effectiveness of the internal control system and the extent of monitoring by management.

In general, the studies conducted by Bonner et al. (1998), Reffett (2007) and Johnson & Rudesill (2001) suggest (1) a negative association between internal control and fraud, (2) auditors are possible defendants in instances of internal control fraud; (3) the chances of auditors being litigated increases when the frauds are of the frequent type in nature; and (4) the chances of auditors being litigated increases when the identified fraud risks can easily be investigated.

The following studies investigated the effect internal control frauds have on auditors.

These studies suggest that auditors respond to identified flaws in internal control by adjusting the nature of the audit tests applied. Matsumura & Tucker (1992) used game-theory analysis and an economic experiment to investigate the effect of: (1) auditor's penalty due from reputation loss and monetary loss from failure to detect fraud, (2) auditing standard requirements that auditors detect fraud or other irregularities, (3) the quality of the internal control structure, and (4) audit fee, on (1) tests of transactions and detailed tests of balances, (2) fraud detection, and (3) incidence of fraud. Matsumura & Tucker found auditors increased tests of transactions, and did not increase tests of fraud, when they assessed the strength of the internal control as high, and by so doing, auditors detected fraud more frequently, which in turn led to less fraud from management. The results suggest the existence of a direct relationship between testing, fraud detection, and fraud prevention. And the results further show auditors react to the possibility of internal control fraud by adjusting their substantive test approach to address the outcome of their internal control assessment, just as Caplan (1999) suggested the strength of a firm's internal control system should be a "red flag" in the fraud risk assessment.

Similarly, Caplan (1999) examined an auditor's decision to investigate for fraud, when a manager has an incentive to misstatement financial information by choosing the weak internal controls. Caplan argued "internal controls are assumed to help prevent and detect unintentional errors and employee wrongdoing, but they do not directly deter management fraud." Caplan further argued a weak internal control system is more prone to errors thus increasing the probability that error will be the cause of an audit exception. In view of these, Caplan reported that when the potential for management override of controls is high irrespective of the strength of the internal control system, it may be rational for auditors to focus more on identifying errors, and not audit precisely for fraud.

In deciding the substantive test approach to apply, auditors consider the possible varieties of irregularities. Matsumura & Tucker (1992) identified these as defalcations (misappropriations of assets) and fraud (misrepresentation of fact). Caplan (1999) identified the latter as intentional noncompliance with regulatory requirements. This study discusses below, fraud types, from a regulatory perspective and from a practical perspective.

### Fraud Types

The Statement on Auditing Standards (SAS) No. 99 (Consideration of Fraud in a Financial Statement Audit) identified misstatements due from fraudulent financial reporting and misappropriation of assets as misstatements (AICPA, 2002; Bell & Carcello, 2000) relevant to auditors in their consideration of fraud. SAS No. 99 indicated fraudulent financial reporting can be accomplished by:

- a) Manipulation, falsification, or alteration of accounting records or supporting documents from which financial statements are prepared.
- b) Misrepresentation in or intentional omission from the financial statements of events, transactions, or other significant information.
- c) Intentional misapplication of accounting principles relating to amounts, classification, manner or presentation, or disclosure.

Ziegenfuss (1996) provided every day examples of how the fraudulent financial reporting can occur. Through a survey of 145 respondents, Ziegenfuss identified 14 fraud types based on number of occurrences. These are: (1) misappropriation of funds (2) theft (3) expense account (4) false invoices (5) other false representation (6) kickbacks (7) credit card (8) cheque forgery and counterfeiting (9) manipulation of cheques (10) medical / insurance claim (11) accounts receivable manipulation (12) false financial statements (13) phantom vendors and (14) other.

Further, the Association of Certified Fraud Examiners (ACFE) has shown misappropriation of assets occurs frequently (Association of Certified Fraud Examiners, 2004, 2006, 2010). In the 2004 “Report to the Nations on Occupational Fraud and Abuse,” about 90% of the fraud cases examined in their survey relate to misappropriation of asset, and included unrecorded sales, understated sales and fictitious expenses. ACFE also found, though misappropriation of assets was most common, the median loss associated with misappropriation of assets was ninety three thousand dollars (\$93,000). Likewise, in the similar report for 2006 by ACFE, the proportion of misappropriation of assets was about 91.5% of fraud cases examined, and the median loss associated with misappropriation of assets was one hundred and fifty thousand dollars (\$150,000). However, in the 2004 report, financial reporting fraud consisted of about 7.9% of the fraud cases and had a median loss of one million dollars (\$1,000,000). Similarly, in the 2006 report, financial reporting fraud was about 10.6% of the fraud cases and had a median loss of two million dollars (\$2,000,000).

This trend is also notable in the 2010 “Report to the Nations on Occupational Fraud and Abuse.” ACFE found approximately 90% of the fraud cases examined relate to misappropriation of assets, and less than 5% of the cases were financial reporting fraud. Moreover, the median loss associated with misappropriation of assets was hundred thousand dollars (\$100,000) in the 2010 report, and the median loss for financial reporting fraud was one million, seven hundred and thirty thousand dollars (\$1,730,000) in the 2010 report.

Financial reporting fraud is often related to management level fraud, and misappropriation of assets is often associated with fraud at the employee level (Choo & Tan, 2007; AICPA 2002; Johnson & Rudesill, 2001). The occurrence of the situations which prior literature identified as being associated with the quality of internal control and auditor litigation

are traceable to the factors of financial reporting fraud identified by SAS 99. For instance, fraud relates to manipulation of transaction supporting documents, earnings management relates to misrepresentation of significant information, while financial restatements which are not due to error relate to intentional misapplication of accounting principles (Caplan, 1999). The results reported by the ACFE show even though financial reporting fraud occurred fewer times than misappropriation of assets, financial reporting fraud involved much higher dollar amounts. This suggests that auditors are more likely to be exposed to litigation due from financial reporting. Since Bonner et al. (1999), found the likelihood of auditor litigation increases when frauds are frequent in nature, this study argues that auditor litigation is likely to increase further in the presence of misappropriation of assets, which are frequent in nature.

In the Statement of Auditing Standard No. 99 (Consideration of Fraud in a Financial Statement Audit), the America Institute of Certified Public Accountants (AICPA) stated, “fraud is a broad legal concept and auditors do not make legal determinations of whether fraud has occurred. Rather, the auditor’s interest specifically relates to acts that result in material misstatement of the financial statements.” SAS 99 defined fraud as “an intentional act that results in a material misstatement in financial statements that are the subject of an audit” (SAS 99 Para. .05). When fraud occurs, three conditions are generally present. These conditions are: (1) incentive or pressure to commit fraud; (2) opportunity to commit fraud; (3) rationalization or attitude towards fraud.

The above suggests that fraud is not an infrequent event, and when fraud occurs, an existing opportunity was taken advantage of by the perpetrator(s). The opportunity to commit fraud can be motivated by: (1) the absence of internal controls, (2) the ineffectiveness of internal control, or (3) management override of internal controls. The interaction between the absence of

internal control or the lapse in internal control, and the occurrence of a fraudulent act that results in material financial statement misstatement is the focus of interest in this study (AICPA, 2002). As such, this study defines internal control related fraud as an intentional act which results in a material misstatement in financial statements under audit, when internal controls are nonexistent or ineffective.

### ***Auditor litigation***

The previous discussions have shown flaws in the internal control system can result in fraud, and since auditors are required, and perform procedures involving internal controls, auditors are more likely to be named as defendants. Hence, a concern is, whether naming auditors as defendants and whether the outcomes of such actions (e.g. claims, and penalty fees) are justifiable. In the following section, this study reviews prior studies on auditor litigation which address issues of ‘meritorious and non-meritorious’ claims against independent auditors, the basis of auditor litigations, the conditions that motivate auditor litigations, and the effect of auditor litigations.

### **Meritorious and non-meritorious’ claims**

In the past, there were concerns about auditors being named as defendants without merit in cases involving financial statements (Kinney, 1993; Palmrose, 1997; Fureman, 1997). This concern has over the years been alleviated through changes in regulations. Below is a discussion of prior literature that investigated issues about meritorious and non-meritorious claims against auditors. Alexander (1991) argues against non-merit litigations and their lack of substance. Alexander examined securities class actions involving initial public offering (IPOs) of computer and computer-related firms during the first six months of 1983, and determined the cases ended

as settlements, and, none were resolved through trials. As such, Alexander stated non-merit litigations, which tend to follow the path of settlements, as opposed to trials, are motivated by structural characteristics, which include the procedural legal rules, the contractual and institutional relationships among the parties, and the economic incentive of the parties concerned.

In the quest to determine if auditors were litigated non-meritoriously, Kinney (1993) developed a framework of “auditor’s liability causal links in auditing.” Kinney suggested substandard audit and substandard financials lead to substandard audited financials. Moreover, the substandard audited financials, in the presence of other causes of value decline result in a decline in investment value. Further, Kinney suggested when an investor invests in a firm based on the information obtained from the substandard audited financials and on influences of other causes of investment, the investment will result in a loss to the investor who relied on the audited financials. Kinney implicitly stated auditors were named as defendants when substandard audits were performed, and investors incurred losses as a result of using information reported in substandard audited financials.

Palmrose (1997) extended the work of Kinney (1993) by identifying three elements of meritorious claims against independent auditors. These elements are substandard financial statements, substandard audits, and compliance with relevant legal standards. According to Palmrose, the two elements substandard audits and substandard financial statements are explicit in Kinney (1993)’s framework. However, the element, compliance with relevant legal standards, “is reflected in a number of the remaining sections of the flowchart (either explicitly or implicitly).” Palmrose explained detrimental reliance is required legally before claims against



independent auditors can be enforced. However, she indicated the proof of detrimental reliance can be implied.

The third element, compliance with relevant legal standards, identified by Palmrose (1997) extends the issue concerning auditor litigation, beyond securities class actions. This element suggests auditors can be named as defendants by regulators too, when they fail to comply with relevant regulations. In this vein, Fureman (1997) tested empirically the theoretical model developed by Kinney (1993). Fureman used 476 private securities lawsuits relating to financial disclosures which occurred between May 1992 and November 1997. The constructs in Kinney (1993) study were proxied using the auditor being named a defendant in a private securities class action, SEC enforcement actions against auditors, SEC enforcement actions against management, bankruptcy, restatement of annual financial statements, and length of class action. Fureman's results suggest a positive and significant relationship between the independent variables and dependent variable (auditor being named a defendant). As such, the result of Fureman's (1997) empirical analysis supports Kinney's (1993) theoretical framework.

Further, Fureman (1999) used 446 class actions from April 1992 to April 1995 to investigate whether nonculpable auditors were habitually named defendants in class actions. Fureman defined litigation as "a quality control mechanism that discourages the performance of substandard auditing services." Fureman argued litigation has to possess some element of accuracy for it to function effectively. However, Fureman acknowledged due to uncertainty and the lack of perfect information, a perfectly accurate auditor liability system is unattainable. The theoretical constructs used in the analysis were auditor culpability, management culpability, and nonculpability. The constructs were proxied as the variables SEC enforcement actions against auditors, SEC enforcement actions against management, bankruptcy, restatement of annual and

quarterly financial statements, and length of class action. The result of the empirical analysis suggests auditors were not habitually named as defendants in securities class actions.

Hence, these studies indicate auditors are named defendants when they perform substandard audit services including when they fail to adhere to established regulations. Further, they suggest both investors and regulators such as the Securities and Exchange Commission (SEC) can name auditors as defendants. Moreover, the motivation for either group is different. For investors, the primary motivation is usually to recoup their investment losses, whereas for the SEC, their motivations include investor protection, accountability and enforcement of established regulations.

#### Basis of auditor litigations

Based on prior literature, auditors are being named as defendants mostly on justifiable basis, which is failure to adhere to relevant legal standards. In this section, this study discusses prior literature that identifies what these relevant legal standards are for auditors.

Dye (1993) showed the increasing quantity and quality of the accounting standards may have an adverse effect on audit quality. According to Dye, claims against independent auditors arise due to either a departure from auditing procedures as prescribed by the Generally Accepted Auditing Standards (GAAS) or a departure from accounting and reporting procedures and practices as prescribed in the Generally Accepted Accounting Principles (GAAP). Dye claims audit quality is unobservable for firms that have no legal issues due from financial matters. However, audit quality becomes public information when legal actions relating to financial matters are brought against a firm by its stakeholder, and when stakeholders have a prima facie case of negligence against the independent auditors.

Further, Schwartz (1998) showed in a situation of vague negligence, an auditor's effort increased with increasing standard requirements. The auditors can escape claims against them, by attaining the level of quality required by the accounting standards. Schwartz suggests auditor's liability may also be determined based on a negligence rule with a vague specification of due care, in addition to clear negligence and strict liability. Schwartz argues that standards and regulations relating to negligence are mostly generic due to cost and possibility of endless scenarios or audit cases. Schwartz suggests the effort required of an auditor under vague negligence is lower than the effort required under clear negligence, since the lower boundary on due care is the auditing standards. Schwartz defined the level of due care as "that effort level, which defines the minimum care an auditor is required to exercise in order to avoid liability."

Dye (1993) and Schwartz (1998) suggest that the relevant legal standards for auditors are the accounting standards, specifically, the Generally Accepted Auditing Standards (GAAS) and to the Generally Accepted Accounting Principles (GAAP). However, the issue of due care is not restricted to the GAAS and to the GAAP, as discussed by Dye (1993) and Schwartz (1998). Due care applies to every standard and regulation that independent auditors are expected and required to comply with and adhere to, including the requirements of the Sarbanes-Oxley Act 2002. Thus, by specifying any standard or regulation, the independent auditor increases his or her expected liability at any audit effort level which is lower than the specified standard or regulation. Thus, an independent auditor is expected to increase his or her incentive to expend more audit effort than would be optimal in the absence of a standard or regulation (Schwartz, 1998).

#### Conditions that motivate auditor litigations

Failure to comply with GAAS and GAAP were noted in prior research as the main bases for auditor litigation. However, not all stakeholders know or understand the requirements of

GAAS, GAAP and other legal requirements such as Sarbanes Oxley Act. Hence, this study presents below a discussion of prior literature addressing the conditions stakeholders observe, and which in turn motivate auditor litigations.

St. Pierre and Anderson (1984) analyzed 334 alleged errors found in the 129 cases filed against public accountants during the period 1960 to 1976, to investigate trends in the nature and characteristics of the cases. They found: (1) the interpretation of accounting principles and auditing standards was more of a problem than procedural matters; (2) plaintiffs were motivated to initiate an error search by signals from the firm or situational characteristics of the firm or the firm industry; (3) legal risk for public accountants increased in situations where the public accountants dealt with new clients (three years or less); (4) certain industries are more prone to legal issues; (5) there were disproportionately more public companies in the cases analyzed; and (6) a lack of the application of the principle of conservatism was apparent.

Palmrose (1987) examined 472 legal cases involving the 15 largest audit firms from 1960 – 1985. The study investigated the effect of management fraud and business failures on the litigations against independent auditors. Palmrose states “litigation against independent auditors takes place in the context of allegations of an audit failure, a situation in which an independent auditor either fails to detect or detects, but fails to report material omissions or misstatements of financial information.” Additionally, Palmrose found, (a) auditor litigation relates to the business climate, such that periods of economic downturns motivate increases in auditor litigations; (b) auditor litigation is likely in cases of business failures or firms facing extreme financial difficulties; (c) most bankruptcy legal cases also involved management fraud; (d) management fraud was present in many of the litigation cases; (e) cases which involved management fraud were mostly resolved via large payment of damages by the independent auditors; (f) business

failure cases without management fraud mostly resulted in the dismissal of the case against the auditor; and (g) cases resolved via damage payments by auditors are more popular in the media, in comparison to cases which result in a dismissal of legal actions against the auditors.

Carcello and Palmrose (1994) examined 655 bankruptcy firms between 1972 and 1992 with Big Six (Big Eight) auditors prior to bankruptcy, to determine whether auditors who issued modified audit reports prior to the bankruptcy were protected from legal liability. In their model, client financial condition is used to capture the presence or absence of the ‘surprise factor’ to financial statement users. They found auditors were defendants in the majority of the litigation cases due to bankruptcy and irregularities in financial reporting. Also, Carcello and Palmrose (1994) found net income and enforcement actions by the Securities and Exchange Commission (SEC) were variables associated with auditor litigation. Further, Carcello and Palmrose found the bankruptcy legal cases had more auditor payment resolutions than auditor dismissals. Thus, they suggested the popular belief that auditors are “deep pockets” may explain their finding, especially since the bankrupt firm has no resources.

Palmrose and Scholz (2000) examined 416 restatement observations from 1995 to June 1999, to determine the relation between financial statement restatement and auditor litigation. They classify restatements as economic restatements and technical restatements. The classification does not involve categorization based on management intentionality (fraud or error). However, these are included as control variables with other control variables such as auditor type and financial condition. Palmrose and Scholz found auditor litigation was more likely with economic restatements than with technical restatements, in all restatements (interim and annual) and in annual restatements alone. Also, they found economic restatements were more severe, and were associated with client conditions such as fraud and bankruptcy.

Heninger (2001) examined the relation between earnings management and auditor litigation using 67 firms with alleged misstatements from 1969 to 1998. Heninger measures earnings management abnormal accruals and controls for auditor, financial condition, firm size, and industry. Heninger found auditor litigation has a positive relation with income increasing abnormal accruals. The result indicates auditors are held responsible for not limiting management's earnings manipulation activities that result in an unfair presentation of the financial statements. Heninger also found auditor litigation is higher when the firms are large in size and when the firms have weak financial conditions.

From the studies above, certain conditions were noted that motivate auditor litigation. The conditions are newness of client, industry, conservatism, economic conditions, bankruptcy, weak financial conditions, irregularities in financial reporting, and restatements. These are some of the conditions that stakeholders observe before they initiate a process to establish audit failure, which if established will most likely lead to auditor litigation.

#### Effect of auditor litigations

The above section presents a discussion of prior literatures that investigated the conditions that motivate auditor litigations. Below, this study reviews literatures that have indicated how auditors respond to the possibility of being litigated. These studies suggest auditors respond to the possibility of being litigated by trying to meet the minimum requirements, by withdrawing from services assessed to be high risk, by assessing more strictly firm aggressive practices, and by issuing modified opinions.

Kothari et al. (1988) examined the effects of increased auditor liability. They decomposed the changes in auditors' liability into changes in the set of people with basis to file claim against the auditor, changes in burden of proof against the auditor, and changes in level of

damages against the auditor, and then analyzed the effect of these three changes on auditors' liability. Kothari et al. identified over fifteen events from Pre-1933 to 1985 that most likely caused changes in the frequency of lawsuits against auditors. The major events include the Securities Act of 1933, the Securities Exchange Act of 1934, and the Securities and Exchange Commission's Rule 10b-5 passed in 1942. Kothari et al. suggest increased auditors' liability could result in reduced public disclosure of some information, which in turn could have an overall effect on the value of public information. Therefore, increase in auditor liability might be a disincentive for auditors and management, to provide useful information to investors, and an incentive to provide the disclosures mandated by standards.

Pratt & Stice (1994) investigated via a field experiment involving 243 audit partners and managers, the relation between auditor judgment of litigation risk and client characteristics, in the auditor's determination of the preliminary audit plan and client fees. The result indicates the client's overall financial condition is the auditor's primary consideration in the assessment of their litigation risk. The result shows auditors assess the risk of litigation as high when potential clients have poor financial conditions.

Shu (2000) examined 247 firms with auditor resignations from 1987 to 1996 to investigate two explanations of auditor resignations: litigation risk and clientele adjustment. Shu found that increase in auditor litigation risk is positively related to the likelihood of the auditor dropping the client. Shu also found the market responds negatively to auditor resignation due to litigation risk, and the extent to which a firm's stock prices declines is inversely related to the severity of the litigation risk.

Chang & Hwang (2003) used an experiment involving 55 audit seniors and managers to examine the effects of client retention incentive and client business risks on auditors' decision

about client's aggressive practices. Firm financial performance, meeting of market's earnings expectation, ability to meet financial obligations, and the litigious environment of the client's industry were the indicators used to determine client business risk. They found an inverse relation between client business risk and auditors' decisions. The result shows auditors are more likely to evaluate more thoroughly a client's aggressive accounting and reporting practices when the client's business risks are high. The findings suggest business risks related to potential litigation is expected to result in decrease in auditors' willingness to accept aggressive accounting and reporting practices.

Blay (2005), through an experiment involving 48 audit managers, examined the effect of independence threats and litigation risk on auditors' evaluation of information and auditors' reporting choices. Blay found auditors faced with high litigation risk evaluated information as more indicative of going concern, and they were more likely to suggest a modified audit report. The auditor's evaluation of information they gathered tended towards the less favorable audit report choice from the client's perspective. The results suggest changes in regulation and standards may affect the process by which auditors evaluate evidential support.

Krishnan and Zhang (2005) examined 4,351 firms from the first quarters of 2000 and 2001, to determine the relation between auditor litigation risk and the decision to attach review report in quarterly filings. They control for factors, such as, auditor type and company size, and find the decision to attach review report in quarterly filings is associated with auditor type and company size. Krishnan and Zhang also found auditor litigation risk is negatively related to the decision to attach review report in quarterly filings. This result according to Krishnan and Zhang suggest that litigation risk maybe a significant consideration in the decision to attach review report in quarterly filings.



The concern regarding most of the auditors' responses to the possibility of being litigated as identified above relate to their focus on the "end-result" e.g. withdrawal, modified opinion. However, as noted above, auditors are litigated mostly for substandard audits not necessarily because of the "end-results." For instance, it is not a question of assessing more strictly firm aggressive practices, it is what auditors do (e.g. communicating to audit committee) after this assessment is completed that really matters. Thus, even the response of meeting the minimum requirement at times may not be sufficient to avoid being litigated.

### ***Sarbanes Oxley Act, Section 404***

#### Pre-Sarbanes Oxley Act

Prior to the enactment of the Sarbanes-Oxley Act (SOX) of 2002, the Foreign Corrupt Practices Act (FCPA) of 1977, was the sole statutory regulation for internal control over SEC registrants, and the SEC registrants were only required to make public disclosure of significant internal control deficiencies, when disclosing auditor change in the Form 8-K (SEC, 1988). According to McConnell & Banks (2003), "the Foreign Corrupt Practices Act of 1977 requires all public companies to devise and maintain a system of internal controls to provide reasonable assurance assets are safeguarded and transactions properly authorized and recorded.

Consequently, many public companies already have various forms of controls documentation such as policy manuals, accounting manuals, memorandums, flowcharts, decision tables and questionnaires. However, few have comprehensively and consistently documented and evaluated controls to the extent necessary to provide an assertion about their effectiveness."

Internal control was not introduced under Sarbanes-Oxley Act of 2002; however, SOX expanded

the reach of the earlier regulations that addressed internal control and explicitly addressed the issues of roles, requirements and responsibility.

Prior studies conducted using pre-SOX data suggest the control environment of a firm affects the firm's operations and the possibility for internal control fraud. Daily & Dalton (1994) examined the relationship between governance structures (*governance structures relate to the control environment of a firm*) and bankruptcy. The study used matched pair design of 57 bankrupt firms from 1972 to 1982. They found a higher likelihood of bankrupt firms having CEOs who also served as board chairpersons. Additionally, they found bankrupt firms had higher proportions of affiliated directors. These results suggest a relationship between governance structures and bankruptcy.

Similarly, using a matched pair sample of 133 alleged fraud cases from 1978 and 2001; Uzun et al. (2004) investigated the relationship between board characteristics and corporate fraud. They found the presence of independent directors had an inverse relation with fraud occurrence and corporate wrongdoing. Uzun et al. found more specifically, the presence of independent committees such as the audit committee had an inverse relation with fraud occurrence. The result thus suggests the composition of the board and the structure of committees are related to occurrence of corporate fraud. The results of Uzun et al. (2004) study, similar to the study conducted by Daily & Dalton (1994), have some implications for the control environment and monitoring element in the internal control structure of firms.

Krishnan (2005) investigated the association between the quality of audit committees and the quality of internal controls. The sample used included 128 companies that changed auditors over the period 1994-2000. The results show audit committees that are independent and have financial expertise are significantly less likely to be associated with internal control shortfalls.

Krishnan also found management's disposition to fraud was associated with internal controls problems. However, external auditors are not consistently associated with the quality of internal controls. The results further show internal control problems are more severe in situations of fraud and significant financial difficulties. More so, the Big 5 (presently, Big 4) firms are more likely to be associated with material weaknesses in internal control than with reportable conditions.

Ashbaugh-Skaife et al. (2007) investigated the economic factors that expose a firm to internal control risk and the incentives that motivate management to identify and report the internal control deficiencies. The study used 585 disclosures of internal control deficiencies pre-SOX 404 periods. The results show firms that reported internal control deficiencies had more complex operations, were growing faster than comparative firms and had difficult financial conditions. Also the result show the firms with internal control deficiencies experienced higher auditor change, had prior SEC enforcement actions, restatements, had more centralized ownership and were audited by larger audit firms. Ashbaugh-Skaife et al. (2007) also show these factors were associated with the firm's incentive to report internal control deficiencies.

#### Post-Sarbanes Oxley Act

Sarbanes-Oxley Act of 2002 (SOX) reinforced and extended the reach of the requirements of the prior regulations such as FCPA 1977, which dealt with internal controls. Sarbanes Oxley Act, Section 404 states management of an issuer, has the responsibility to establish, and to maintain an adequate internal control structure and procedures for financial reporting. Further, Section 404 states management has the responsibility to report on their assessment of the effectiveness of the internal control structure and the procedures for financial reporting. Disclosures about internal controls was one of the major requirements of SOX, and

this study discusses below, research that used post-SOX data in the investigation of internal control disclosures and its effect on auditors.

Ge & McVay (2005) examined 261 firms with material weakness disclosures from August 2002 to November 2004, to determine the specific types of material weaknesses in internal control over financial reporting and the characteristics of the firms associated with material weakness disclosures. They obtained the sample of their study from EDGAR and Compliance Week. Ge & McVay found material weaknesses were associated with account specific matters (mostly accrual accounts), training, accounting policies, revenue recognition, segregation of duties, account reconciliation, subsidiary specific matters, senior management, and technology issues. Ge & McVay also found firms disclosing material weaknesses had more complex operations, the firms were smaller in size, the firms had less profitability, and the firms were mostly audited by the larger audit firms. Ge & McVay suggest, since the large audit firms tend to have more exposure to litigation, the audit firms might have been more diligent in their audit procedures which identified the material weaknesses.

Similarly, Zhang et al. (2007) examined the association between audit committee quality, auditor independence, and the disclosure of material weakness, using a matched pair sample of 208 firms with material weakness disclosures between November 15, 2004 and July 31, 2005. The results show a higher likelihood of internal control weakness when firms have audit committees with less financial expertise. Also, Zhang et al. found a higher likelihood of internal control weakness when auditors are more independent, and a higher likelihood of internal control weakness for firms that changed auditors.

Further, Krishnan & Visvanathan (2007) examined the relation between the characteristics of audit committees and auditors, and the disclosure of material weakness, using a

matched pair sample of 90 firms with material weakness disclosures between November 15, 2004 and March 1, 2005. They control for restatements, CFO experience, profitability, complexity, growth and organizational changes. Krishnan & Visvanathan found firms that reported internal control weaknesses experienced higher auditor changes and a greater incident of restated financial statements.

The results reported by Ge & McVay (2005), Zhang et al. (2007) Krishnan & Visvanathan (2007) support the earlier findings about the nature of firms with internal control related fraud. The results reported by Ge & McVay (2005) also suggest auditors responded to the requirements of SOX by enhancing their audit procedures. Raghunandan & Rama (2006) and Hogan & Wilkins (2008) investigated the latter notion, and found results in support of the notion. Raghunandan & Rama (2006) used a sample of 660 manufacturing firms with December 31, 2004 year-end, to investigate the relation between audit fees and internal control disclosures under section 404. Raghunandan & Rama found audit fees increased by 43% between 2004 and 2003, for clients with material weakness disclosure. Raghunandan & Rama interpreted their results as suggesting auditors were either not performing rigorous tests of internal control in 2003, or started internal control testing in 2004. As such, they concluded the additional work needed for internal control testing is likely the cause for the increase in audit fees in 2004 especially in situations where the internal control system is plagued with material weaknesses.

Hogan & Wilkins (2008) investigated the relation between audit fees and internal control deficiencies by using a matched sample of 284 internal control deficiency observations between November 1, 2003 and November 30, 2004, to determine if audit firms follow the audit risk model in reality. The results show significant increase in audit fees (proxy for audit effort) for firms with internal control deficiencies. Also, the results indicate higher levels of inherent risk

were associated with firms with internal control deficiencies. Hogan & Wilkins also found a consistency with the audit risk model and auditor procedures.

Similarly, Patterson & Smith (2007) investigated how Sarbanes-Oxley Act of 2002 might affect the firm's choices about internal control and auditor's internal control testing. They argue internal control tests only provide information about management's choices relating to internal control, and the tests do not provide evidence of fraud. Patterson & Smith (2007) suggest evidence of fraud can be observed via substantive tests, and unattainable internal controls might result in: (1) firms choosing weaker internal control systems, and (2) increases in audit costs. The theoretical analysis suggests internal control tests are indicators of the possibility of fraud through the assessment of the strength or weakness of the internal control system. The results also show the amount of fraud decreased as internal control strength increased. However, in situation where internal controls are strong, internal control testing increased up to a point after which additional internal control testing did not provide additional value (i.e. new information about fraud). Also, Patterson & Smith found audit costs including audit fees, increased with increase in internal control testing due to Sarbanes-Oxley.

#### Discussion on Auditor litigation and internal control fraud in Post-SOX period

The studies discussed above suggest the characteristics of firms with internal control issues resulting in fraud, in the post-SOX era are similar to those in the pre-SOX era studies. Further, these studies show in response to the requirements of SOX, auditors adapted their testing approach and increased audit procedures performed, which resulted in higher audit fees. However, Dye (1993) suggests audit fees include a component for audit services plus a component for the risk of auditor litigation. The latter component has not been extensively addressed post Sarbanes Oxley, 2002. As such, this study contributes to existing literature on

Sarbanes Oxley and risk of auditor litigation by investigating the effect of SOX 2002, Section 404 on auditor litigations, within the context of internal control related fraud.

In general, legal proceedings as implied by the procedural justice theory, are followed in order to place the blame and accountability (or lack thereof) on an entity, and in so doing, to compensate the victims. The primary victims in most legal proceedings of publicly listed firms are the investors. Regulations, such as, the Sarbanes Oxley Act were enacted to protect investors (US Congress 2002), and bodies, such as, the SEC enforces these regulations. Firms have been made to pay fines and compensate investors for losses they experienced due to decision and practices of management which are in adverse to acceptable business practices and regulations. Auditors have also been held liable if the overriding perception is the auditors have failed in carrying out their responsibilities, and knowingly or unknowingly aided firms in defrauding investors. Since the primary intent of plaintiffs, in this case the SEC, is to enforce regulations, and thereby protect investors, the risk is greater the SEC will sue any party (including auditors) involved in financial statement frauds.

Further, prior literature and regulations have shown financial reporting fraud is more sophisticated and more costly than misappropriation of assets. However, the latter by reason of their nature tend to occur more frequently. Also, the accounts usually involved in misappropriation of assets (e.g. cash, inventory), combined with the level of judgment needed in testing these accounts makes them more auditable than accounts usually involved in financial reporting fraud (e.g. revenue). As such, auditors would be expected to identify misappropriation of assets easier than financial reporting fraud. In addition, auditors would be expected to heighten their audit investigation when misappropriation of assets is noted, since it suggests a lapse in the internal control system of a firm, and may possibly lead to the uncovering of

financial reporting fraud. This view is implied by the attribution theory which suggests evaluators would most likely believe comparable persons would not act differently given such circumstances. Therefore, this study presents the following hypotheses:

**H1: In the post-Sarbanes Oxley 404 period, auditors are more likely to experience increased litigation due to internal control related fraud.**

**H2: In the post-Sarbanes Oxley 404 period, the likelihood of auditor litigation is further increased in the presence of misappropriation of assets.**

### *Accelerated filers*

Part 240.12b-2 of the Code of Federal Regulations<sup>3</sup>, was amended in September 2002 to include the definition of “accelerated filers.” Accelerated filers are firms with a market capitalization of at least \$75 million and non-accelerated filers are those with market capitalization of less than \$75 million. The SEC established the filing deadlines for annual and quarterly reports based on whether a firm is an accelerated filer or a non-accelerated filer. In addition, all publicly traded firms are required to comply with Sarbanes-Oxley Act of 2002. With respect to section 404, the compliance date for an accelerated filer is its first fiscal year ending on or after November 15, 2004, and the compliance date for a non-accelerated filer is its fiscal year ending on or after July 15, 2005. The different compliance dates were established because the non-accelerated filers may experience difficulty in evaluating their internal control over

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<sup>3</sup> Title 17, Chapter II, Part 240-12b-2 of the Code of Federal Regulations. <http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=afb2c8740477dfe9dd4fe4a45e081dbc&rgn=div8&view=text&node=17:3.0.1.1.1.2.66.106&idno=17> [Accessed January 15, 2012].



financial reporting because these non-accelerated filers may not have as formal and well-structured a system of internal control over financial reporting as larger companies.<sup>4</sup>

The accelerated filers have a minimum of \$75 million in market capitalization (share price times the number of outstanding shares), which suggests that either their share prices are high, or the number of outstanding shares are high, or both are high. The accelerated filers, as such, have access to capital sources and thus more resources. Prior literature (Krishnan & Visvanathan, 2007; Doyle et al., 2007; Ashbaugh et al., 2007) has shown that profitable firms have more resources to invest in internal control. Ge and McVay (2005) found a negative association between firms' resources and internal control ineffectiveness. Thus, these studies suggest firms with more resources (assets, staff requirements, training, and access to capital) are more likely to have more effective internal controls than firms with limited resources.

An effective internal control system at a minimum will possess components similar to those of the COSO internal control framework. The components are: (1) control environment, (2) risk assessment, (3) control activities, (4) information and communication, and (5) monitoring (AICPA, 2004). Accelerated filers have more resources to invest in these components of internal control framework and by doing so; they minimize the likelihood of the occurrence of internal control fraud. In view of the above, this study argues that accelerated filers are more likely to have well developed and effective internal controls, and are thus less likely to be associated with auditor litigation due to internal control fraud. Therefore, this study presents the following hypothesis:

**H3: Non-accelerated filers are more likely to have higher auditor litigation due to internal control related fraud than accelerated filers.**

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<sup>4</sup> SEC.2004. Final Rule: Management's Report on Internal Control over Financial Reporting and Certification of Disclosure in Exchange Act Periodic Reports. [www.sec.gov/rules/final/33-8392.htm](http://www.sec.gov/rules/final/33-8392.htm) [Accessed October 1, 2010].

### ***Auditor's internal control over financial reporting report***

Under section 404(b) auditors are required to: (1) attest to the effectiveness of internal control, and (2) report on the assessment of internal control and related disclosures made by a firm's management under section 404(a). To comply with this requirement, auditors have the responsibility to design and perform audit procedures that will provide adequate evidential matter about internal controls, and thus support the auditor's opinions (Reffett, 2007; US Congress 2002; Caplan, 1999; Matsumura & Tucker, 1992).

If the auditor's opinion indicates the absence of control deficiencies, significant deficiencies or material weaknesses, it implies the design, implementation and operations of the internal controls are adequate to the extent the internal controls would allow management or employees, in the normal course of performing their assigned functions, to prevent or detect and correct financial statements misstatements on a timely basis. Sarbanes Oxley made matters and responsibilities relating to internal controls more prominent than any earlier regulation, and the stakes are higher for all parties involved, including auditors.

An auditor's report on internal control may be unqualified, a disclaimer, or adverse. Below is an excerpt from the 2004 Annual Report (10-K)<sup>5</sup> of Avery Dennison Corporation. The report is unqualified.

*“Also, in our opinion, management's assessment, included in the accompanying “Management's Report on Internal Control Over Financial Reporting,” that the Company maintained effective internal control over financial reporting as of January 1, 2005 based on criteria established in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”), is fairly stated, in all material respects, based on those criteria. Furthermore, in our opinion, the Company maintained, in all material respects, effective internal control over*

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<sup>5</sup>Source: <http://www.auditanalytics.com/0002/view-internal-controls.php?cfk=8818&is=1&aickey=4675> [Accessed: December 23, 2011].

*financial reporting as of January 1, 2005, based on criteria established in Internal Control – Integrated Framework issued by the COSO...”*

The excerpt below is from the 2004 Annual Report (10-K)<sup>6</sup> of Bally Total Fitness Holding Corporation. The report is adverse.

*In our opinion, management’s assessment that Bally Total Fitness Holding Corporation did not maintain effective internal control over financial reporting as of December 31, 2004, is fairly stated, in all material respects, based on criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Also, in our opinion, because of the effect of the material weaknesses described above on the achievement of the objectives of the control criteria, Bally Total Fitness Holding Corporation has not maintained effective internal control over financial reporting as of December 31, 2004, based on criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).*

The report about internal control over financial reporting is a core “product” of auditing firms, and since auditors are required (section 201 of SOX 2002) and perceived to be independent third parties, stakeholders are deemed to perceive such reports as more reliable and valid than any similar reports from management. In view of the above, this study argues auditors are most likely to be held accountable, and thus be exposed to litigation if their opinion on internal controls over financial reporting is based on procedures that do not identify any type of deficiencies, and yet internal control related fraud are noted subsequently to be occurring and going undetected. This notion is implied by the attribution theory which suggests evaluators would most likely believe comparable persons would act differently given circumstances, such as, instances of internal control fraud. Therefore, this study presents the following hypothesis:

**H4: Auditors are more likely to experience litigation due to internal control fraud in the presence of an unqualified opinion for internal control over financial reporting.**

<sup>6</sup> AuditAnalytics. <http://www.auditanalytics.com/0002/view-internal-controls.php?cfk=770944&is=1&aickey=7182> [Accessed: December 23, 2011].

## **Sarbanes-Oxley Act, Section 302**

Section 302 of Sarbanes-Oxley, which became effective on August 29, 2002, requires that: (1) management acknowledge their responsibility for establishing and maintaining internal controls, (2) periodically evaluate the effectiveness of their firm's internal controls, (3) conclude and report on the effectiveness of their internal controls, and (4) disclose issues (significant deficiencies and material weaknesses) with internal controls and fraud to their auditors.

The disclosures under Section 302 are voluntary, thus, management has a leeway about what to disclose and what not to disclose. Moreover, auditors had no requirements under Section 302 beyond what may be considered typical, e.g. considering information (if any) management communicates to them under Section 302, in planning and executing an audit. In which case, the issues about Section 302 becomes questions of: (1) what management is disclosing or not disclosing?, especially since prior literature (Francis et al., 2004 and 2005; Ogneva et al., 2007; Ashbaugh-Skaife et al. 2007) has shown that firms with internal control issues are faced with a higher cost of capital, and will thus have an incentive to make more voluntary disclosures about internal control in order to reduce their cost of capital; and (2) what the auditor does with the information disclosed to them especially since accounting and auditing standards have encouraged that auditors skeptically examine information they receive in the course of an audit (SAS 99). Management's assessment of disclosure controls under Section 302 may show that their firm's internal control is ineffective as in the excerpt below from the 2004 Annual Report (10-K)<sup>7</sup> of Bally Total Fitness Holding Corporation.

*“Management of the Company, with the participation of the Chief Executive Officer and the Chief Financial Officer, evaluated the effectiveness of the design and operation of the Company's disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-*

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<sup>7</sup> Source: <http://www.auditanalytics.com/0002/view-internal-controls.php?cfk=770944&is=1&mickey=7183>  
[Accessed: December 23, 2011].

*15(e) of the Securities Exchange Act of 1934, as amended (the Exchange Act)), as of December 31, 2004. Based upon this evaluation, the Chief Executive Officer and the Chief Financial Officer have concluded that the Company's disclosure controls and procedures were not effective as of December 31, 2004 due to the material weaknesses in internal control over financial reporting described below (Item 9A(b))...*

*Management of the Company is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) under the Exchange Act. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate. A material weakness represents a significant deficiency (as defined in the Public Company Accounting Oversight Board's Auditing Standard No. 2), or a combination of significant deficiencies, that results in more than a remote likelihood that a material misstatement of the annual or interim financial statements will not be prevented or detected on a timely basis. Management conducted an assessment of the effectiveness of the Company's internal control over financial reporting as of December 31, 2004 based on the framework published by the Committee of Sponsoring Organizations of the Treadway Commission, Internal Control — Integrated Framework. Management has identified the following material weaknesses in the Company's internal control over financial reporting as of December 31, 2004: 1. Deficiencies in the Company's control environment. The Company did not maintain an effective control environment as defined in the Internal Control-Integrated Framework published by the Committee of Sponsoring Organizations of the Treadway Commission... These deficiencies resulted in a more than remote likelihood that a material misstatement of the Company's annual or interim financial statements would not be prevented or detected, and contributed to the development of other material weaknesses described below..."*

The assessment may also indicate that internal control is effective as in the excerpt below from the 2004 Annual Report (10-K)<sup>8</sup> of Avery Dennison Corporation.

*"The Company maintains disclosure controls and procedures (as defined in Exchange Act Rule 13a-15(e) and 15d-15(e)) that are designed to ensure that information required to be disclosed in the Company's Exchange Act reports is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms, and that such information is accumulated and communicated to the Company's management, including its Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding the required disclosure.*

<sup>8</sup>Source: <http://www.auditanalytics.com/0002/view-disclosure-controls.php?cfk=8818&is=1&dckey=12826>  
[Accessed: December 23, 2011].

*In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and management necessarily is required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures...*

*Based on the foregoing, the Company's Chief Executive Officer and Chief Financial Officer have concluded that the Company's disclosure controls and procedures are effective to provide reasonable assurance that information is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to the Company's management, including its Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding the required disclosure..."*

Finally, firms may fail to issue a report under Section 302. The failure to issue a report under Section 302 usually sends a negative signal to stakeholders.

Thus, this study argues that management's assessment and disclosure regarding ineffective internal control under Section 302 or the absence of management's assessment and disclosure related to internal control, will result in auditor litigation. This argument is based on the attribution theory, since in both instances, evaluators would expect auditors to be motivated to probe or investigate more the reasons for the ineffective internal control, and perform more substantive procedures to reduce the overall audit risk (Ge and McVay, 2005). Therefore, this study presents the following hypothesis:

**H5: Firms with no or negative management voluntary disclosures concerning internal control are positively associated with auditor litigation.**

### ***Recap of Hypotheses***

The hypotheses are as follows:

**H1: In the post-Sarbanes Oxley 404 period, auditors are more likely to experience increased litigation due to internal control related fraud.**

**H2: In the post-Sarbanes Oxley 404 period, the likelihood of auditor litigation is further increased in the presence of misappropriation of assets.**

**H3: Non-accelerated filers are more likely to have higher auditor litigation due to internal control related fraud than accelerated filers.**

**H4: Auditors are more likely to experience litigation due to internal control fraud in the presence of an unqualified opinion for internal control over financial reporting.**

**H5: Firms with no or negative management voluntary disclosures concerning internal control are positively associated with auditor litigation.**

### III Methodology

#### *Research Design*

This study seeks to determine the change in auditor litigation due to internal control related fraud by using the pooled cross-sectional logit model. Using pooled cross-sectional from different years has been determined to be an effective way of analyzing the effects of a new policy, especially since the focus of pooled cross-sectional analysis is to examine how a key relation has changed over time (Wooldridge, 2006). One assumption about pooled cross sectional is observations are independent across time. However, this may not always be true.

In this study, for some firms, the observations of fraud occurrence are consecutive across years. The fraud occurrence in each year is different, but is related to the fraud occurrence in a preceding or subsequent year, immediately following that fraud occurrence. This suggests a non-independence of such observations pooled across time and may imply a correlation of the error terms within firms. To address this issue, observations are put in well-defined clusters. In this study, observations are clustered by firms' CIK numbers, and thus, the standard errors of the estimates are robust to within cluster correlation.

The logit model is a form of the binary regression model, and this study uses the logit model to investigate how the independent variables affect the probability of auditor litigation. With a logit model, probability estimates are between the lower and upper bounds of 0 and 1, and the probability is a nonlinear function of the independent variables (Long and Freese, 2006;



Freeman 1978). According to Long and Freese (2006), since the model is nonlinear, the magnitude of the change in the outcome (auditor litigation) probability that is associated with a given change in one of the independent variables depends on the levels of all the independent variables. The logit probability model is as below:

$$\Pr (y = 1 | x) = \frac{\exp (\alpha + \beta X)}{1 + \exp (\alpha + \beta X)}$$

### ***Dependent variable***

#### **Auditor litigation**

Bonner et al. (1998) used a multivariate model with two forms: (1) auditor litigation and no litigation, and (2) auditor litigation and other litigation. This study focuses on auditor litigation resulting from internal control related fraud. Thus, only one form of the model is required, and as such a bifurcation of auditor litigation is not necessary. Auditor litigation will be operationalized using a dummy variable, where (1) will represent presence of auditor litigation and (0) will represent absence of auditor litigation.

### ***Independent Variables***

#### **Sarbanes-Oxley Act 2002, Section 404**

Dummy variables are used to represent the periods as pre-Sarbanes-Oxley or post-Sarbanes-Oxley. Since Section 404 became effective November 15, 2004 for accelerated filers, the first year for adoption of Section 404 begins November 15, 2004. As such, the periods included in the study as post-Sarbanes-Oxley, Section 404, are all fiscal year-end from November 15, 2004 to December 31, 2004, and all fiscal year-end periods for the calendar year 2005 and 2006 for accelerated filers. For non-accelerated filers, post-SOX 404 period begin July

15, 2005. The pre-Sarbanes-Oxley period include all fiscal year-ends for the calendar years 2000 up to July 30, 2002. The period from the enactment of Sarbanes Oxley Act of 2002 (July 30, 2002) to the effective date of Section 404 (November 15, 2004) is the transition period for the study. The transition period extends to July 14, 2005 for non-accelerated filers. Dummy variables are included in the model to represent the transition and post-SOX 404 periods.

#### Internal control system related fraud

Internal control related frauds are either financial reporting fraud or misappropriation of assets following SAS 99 (*Consideration of Fraud in a Financial Statement Audit*). The sample includes firms with internal control related frauds (specifically, firms that have financial reporting fraud). As such, a dummy variable is included in the model for misappropriation of assets. This variable does not represent firms that have only misappropriation of assets, but rather, firms that have both financial reporting fraud and misappropriation of assets. As such, this variable represents an interaction between financial reporting fraud and misappropriation of assets. This variable equals one if both types of fraud (financial reporting fraud and misappropriation of assets) occurred in a firm and zero if only financial reporting fraud occurred.

#### Accelerated filers

Dummy variables are used to represent whether a firm is an accelerated filer or a non-accelerated filer. Firms are 1 if they are accelerated filers and 0, otherwise. Sarbanes Oxley Section 404 became effective November 15, 2004 for accelerated filers, and the compliance date for a non-accelerated filer is its fiscal year ending on or after July 15, 2005. Note the filing status of a firm may change year after year, since it is dependent on a firm's market value of outstanding voting and non-voting shares as at the end of the second quarter of its fiscal year.

### Section 404 of Sarbanes-Oxley – Auditor’s report on internal control over financial report

Auditor’s opinion on firm’s internal control over financial reporting is included as a dummy variable in the model. The variable equals one when the auditor’s report is unqualified and equals zero when the report does not exist or is adverse. Since the effective date for this report is November 15, 2004, there are no observations for periods prior to this date.

### Section 302 of Sarbanes-Oxley – Management’s voluntary disclosures about internal control

The unaudited voluntary disclosures made by management about their firm’s internal control are included as a dummy variable in the model. The variable equals one when management makes disclosures and indicate internal control is effective, and equals zero when no disclosure exists or management’s disclosure indicates ineffectiveness in the internal control. Since the effective date for this report is August 2002, there are no observations for periods prior to this date.

### ***Control Variables***

The research model includes a set of control variables that prior literature has shown to have a positive or negative association with auditor litigation.

#### Auditor type

Prior research (Ashbaugh et al., 2007; Krishnan & Zhang, 2005; Heninger, 2001; Bonner et al., 1998; Kothari et al., 1988) has suggested a relation between auditor litigation and auditor type. Auditors are perceived as “deep pockets,” which implies they have resources to bear litigation risk (Krishnan & Zhang, 2005; Carcello and Palmrose, 1994; Kothari et al., 1988). Since the larger audit firms tend to have more resources and audit more publicly traded

companies, whereas the smaller audit firms have lesser resources and audit more non-publicly traded companies, these larger audit firms are expected to encounter more litigation than the smaller audit firms. On the other hand, the regulators (e.g. SEC) are more concerned with enforcing the rules that govern accounting and auditing, and ensuring investor protection. Their motivation is not necessarily based on audit firms with “deep pockets,” but more of responsibility and accountability. Following prior studies, this study includes a control variable for auditor type.

#### Firm size

Prior literatures (Krishnan & Zhang, 2005; Heninger, 2001; Bonner et al., 1998; Carcello & Palmrose, 1994) have shown firm size is associated with auditor litigation relating to financial reporting and disclosures. The association between firm size and auditor litigation may exist because larger firms most likely have more resources to fight legal cases if necessary. Also, firm size has been shown to be associated with capital market (Krishnan & Zhang, 2005) which can be an incentive to firms and auditors to disclose more information and thus minimize the chances for litigation, including litigations due to fraud. The disclosures can be related to matters, such as, segments, consolidation of operations, and foreign activities, as required by the Generally Accepted Accounting Principles. These disclosures expose firms and auditors to litigation (Heninger, 2001; Bonner et al., 1998; Carcello & Palmrose, 1994). Therefore, to remain consistent with prior research, this study includes a control variable for firm size. And following Krishnan & Zhang (2005), the natural log of total assets is used in the model.

#### Firm financial condition

According to Pratt & Stice (1994), “a client’s financial condition is related to the probability of both capital provider losses and the auditor being held responsible for those

losses.” Prior literatures (Palmrose & Scholz, 2000; Fureman, 1997; Carcello & Palmrose, 1994; Palmrose, 1987) have shown associations between firms’ financial conditions and auditor litigations. Declining financial conditions indicated by recurring losses and low ratios such as return on assets, may motivate management to manage earnings, which can lead to material misstatements, and also increase audit risk. Moreover, profitable firms have more resources to invest in internal controls, and prior studies have shown an association between profitability and internal controls (Krishnan & Visvanathan, 2007; Doyle et al., 2007; Ashbaugh et al., 2007). The effect of firm financial condition is controlled in the same manner as in the Krishnan & Visvanathan (2007) study. They measured profitability using return on asset (ROA), and measured ROA as operating income scaled by average total assets.

#### Industry

Firms operate within industries and each industry has its attributes. Such attributes may include dominance of intangible assets e.g. the financial industry. Prior literature (Bonner et al., 1998; Martin et al. 1996; Palmrose, 1988) has shown industry affects auditor litigation. The technology industry and the financial industry have been documented by these prior studies as having higher litigation rates than other industries. Thus, to remain consistent with prior research, this study includes control variables for the technology and financial industries. Two sets of dummy variables are included following Bonner et al. (1998). The technology industry is represented by 1 if a firm is in the technology industry and by 0, otherwise. The financial industry is represented by 1 if a firm is in the financial industry and by 0, otherwise.

#### Stock Exchange

Prior literatures (Bonner et al., 1998; Carcello & Palmrose, 1994) have suggested the stock exchange on which a firm is listed may be associated with auditor litigation. The

requirements of stock exchanges differ and the differences in requirements may be the basis for stock exchanges' association with auditor litigation. Following prior studies, a dummy variable is included in the model for Stock Exchange. Since, the New York Stock Exchange is the largest and most popular in the U.S., the dummy variable for Stock Exchange is described in the model as New York Stock Exchange (NYSE) and takes on a value of 1 if a firm is listed in NYSE and 0, otherwise.

### Firm Status

Prior studies suggested auditor litigation is higher for public companies in comparison to non-public companies (Bonner et al., 1998; St. Pierre and Anderson, 1984). Sarbanes-Oxley Section 404 focuses on public companies; therefore, non-public companies are not included in the scope of this study. However, there exist differences within public companies relating to their status as to whether or not they are closely held public companies. I define closely held public companies as public companies with a controlling number of shares held by a few shareholders. Therefore, this study controls for firm status (closely held or not) by including a dummy variable that equals 1 if a firm is not closely held, and 0 otherwise.

### Initial Public Offerings

Prior literatures indicate IPO firms are associated with earning management and fraud (Palmrose, 2000; Krishnan 2005), and IPO firms are high litigation risk engagements (Colbert et al., 1996). Therefore, this study includes a variable for IPO. This variable equals 1 if a firm is an IPO firm, and 0 otherwise. To be considered as an IPO firm, (1) a firm would have an IPO within three years of the first year of fraud following Bonner et al. (1998), and (2) the SEC in its AAERs would have associated (even marginally) the fraud with the initial public offering.

### **Research model**

$$\Pr(\text{AUDLIT}=1) = F(\beta_0 + \beta_1\text{Trans} + \beta_2\text{Post} + \beta_3\text{MOA} + \beta_4\text{MOATrans} + \beta_5\text{MOAPost} + \beta_6\text{Accel} + \beta_7\text{Aud404} + \beta_8\text{DC302} + \beta_9\text{AUD} + \beta_{10}\text{LNSIZE} + \beta_{11}\text{FINCOND} + \beta_{12}\text{Technology} + \beta_{13}\text{Financial} + \beta_{14}\text{NYSE} + \beta_{15}\text{CloselyHeld} + \beta_{16}\text{IPO})$$

Where;

- F(.) = the cumulative distribution function;
- AUDLIT = indicator for auditor litigation;
- Trans = indicator variable equal to 1 for period between enactment of SOX, 2002 and effective date for SOX 2002, Section 404, and zero otherwise;
- Post = indicator variable equal to 1 for period from effective date for SOX 2002, Section 404, and zero otherwise;
- MOA = interaction variable for misappropriation of asset and financial reporting fraud. Variable is equal to 1 if fraud in firm includes both FRF and MOA, and equal to zero if fraud is FRF only;
- MOATrans = interaction variable for misappropriation of asset and transitional period. Variable is equal to 1 if MOA occurred in the transitional period and equal to zero otherwise;
- MOAPost = interaction variable for misappropriation of asset and post period. Variable is equal to 1 if MOA occurred in the post period and equal to zero otherwise;
- Accel = indicator variable equal to 1 for accelerated filer, and zero otherwise;
- Aud404 = indicator variable equal to 1 one when the auditor's internal control report is unqualified and equals zero when the report does not exist or is qualified;
- DC302 = indicator variable equal to 1 when voluntary disclosures indicate internal control is effective, and equals zero when no disclosure exists or disclosure indicates ineffectiveness in the internal control;
- AUD = indicator variable for auditor, equal to 1 for Big 4 audit firm, and equal to zero otherwise;
- LNSIZE = the natural log of total assets;
- FINCOND = Financial condition, measured as return on assets.
- Technology = indicator variable for technology industry, equal to 1 for firm in technology industry, and equal to zero otherwise;
- Financial = indicator variable for financial industry, equal to 1 for firm in financial industry, and equal to zero otherwise;
- NYSE = indicator variable for stock exchange, equal to 1 for NYSE, and equal to zero otherwise;
- Closely held = indicator variable for if firm is closely held, equal to 1 for not closely held, and equal to zero otherwise;
- IPO = indicator variable for firm with initial public offering within three years of the fraud, equal to 1 for IPO within three years of fraud, and equal to zero otherwise.

## IV Analysis

### *Sample Size Determination*

The study includes the period 2000 to 2006, which represents the pre-SOX and post-SOX periods. Data of firms that experienced internal control related fraud was obtained from Accounting and Auditing Enforcement Releases (AAERs) published in the SEC website. Each AAER published by the SEC from 2000 to the second quarter of 2011 was examined. The search was extended beyond 2006 because of the time lag between when frauds occur and when SEC becomes aware of and announces them. The sample consists of observed U.S. listed firms with internal control related frauds in any of the years 2000 to 2006. To be included in the sample, the firm must (1) have an internal control related fraud enforcement by the Security and Exchange Commission's (SEC), (2) be publicly traded, (3) have 10-K reports on LexisNexis or SEC website, and (4) have data reported in Audit Analytics, Compustat or Lexis Nexis.

Auditor litigation information and internal control related fraud information were collected from the SEC website or Audit Analytics. Since auditors may be litigated in a year for an audit or audits performed in previous years, in collecting data for the dependent variable, auditor litigation, the focus was on the fiscal year period to which the auditor litigation relates and not the year the SEC enforcement actions are reported on the SEC's website. Similarly, since internal control related fraud may occur in a year or years different from the year in which the SEC issued an enforcement action relating to the internal control related fraud, this study uses the actual period in which an internal control related fraud occurred instead of the year related



enforcement action was reported by the SEC. For instance, if an internal control related fraud occurred in 2004, but the related enforcement action was not released till 2007, the study used 2004 as the relevant period. Thus, the treatment for fraud occurrence and auditor litigation is symmetrical. Therefore, data for the study was obtained from SEC enforcement actions released from 2000 to 2011 (second quarter). Since SOX 2002 affected firms at the same time, an inherent limitation of this study relates to the impossibility to identify both: (i) time specific effects by using time dummies and (ii) the effect of Sarbanes-Oxley because Sarbanes Oxley dummy is a linear function of time dummies.

The examination of the AAERs entailed identifying the period of the litigation (if the period is not applicable to the study, it was omitted); and reading through the case to understand the role of the auditor. For some of the fraud litigation cases, the auditor's roles are included in the same AAER with the firms. For other litigation cases where the auditor's AAER was separate from the firm's AAER, the data was matched based on the firm name and the period of the fraud. After examining the AAERs, the firm CIK numbers were obtained from Audit Analytics, for firm identification in other databases. Subsequently, information about firms, such as, auditor name for each year, fiscal year end, IPO year, Stock Exchange listing and industry were obtained from Audit Analytics. Further, data about firms' total assets and net income were obtained from COMPUSTAT, using firms' CIK (Central Index Key used on the SEC's computer system to identify corporations) numbers. Data relating to firm's filing status (accelerated or non-accelerated), and whether firms are closely held, were obtained from firms' SEC filings.

From the SEC's Accounting and Auditing Enforcement Releases (AAERs) from 2000 to the second quarter of 2011, 261 firms (clusters) with fraud cases within the relevant period were identified. Sixteen firms (clusters) were eliminated because the fraud cases were not related to

financial statement issues and 33 firms (clusters) were eliminated because they were not publicly traded companies. Of the remaining 212 firms (clusters), 3 were deleted because their CIK number was not identified. The final sample includes 209 firms (clusters) with internal control fraud. Of these 209 firms, the SEC named the auditors of 67 firms as defendants. The remaining 142 firms did not have their auditors named as defendants. The determination of sample described above is summarized in Table 1.

The final sample of 209 firms (clusters) comprises 629 observations pooled across the period 2000 to 2006. Table 2 shows a breakdown of the observations with internal control related fraud, by year. In 2000, 116 (18%) firms with internal control fraud were observed, and in 2001, 137 (22%) firms with internal control fraud were observed. In 2002 and 2003, 116 and 92 firms with internal control fraud were observed, respectively. Seventy-six (12%) firms with internal control fraud were observed in 2004. In 2005 and 2006, 57 and 35 firms with internal control fraud were observed, respectively.

There is a decrease in observed instances of internal control fraud in the transition period and the Post-SOX 404 period. This decrease may be partly attributed to the effect of firms' preparations to comply with SOX 404 during the transition period and the subsequent compliance with the requirements of SOX 404, after the effective date. Further, the decrease in observed instances of internal control fraud in the transition period and the Post-SOX 404 period may also be partly attributed to not observing internal control fraud cases not yet public information. The unobservable instances of internal control fraud are due to the time lag between the time of internal control fraud occurrence and the time of the SEC public designation of fraud.

**TABLE 1****Sample Determination**

The table below provides a summary of how the final sample was determined.

	<b>Number of firms</b>
Firms with internal control fraud from AAERs	261
Deleted non-financial statement fraud firms	(16)
Deleted non-publicly traded firms	(33)
Deleted firms without identifiable CIK number	<u>(3)</u>
Final sample of fraud firms	<u>209</u>
Firms with auditors named as defendants by the SEC	67
Firms with auditors not named as defendants by the SEC	<u>142</u>
Final sample of fraud firms	<u>209</u>

**TABLE 2****Distribution of Sample Observations with Internal Control Related Fraud, by Year**

<b>Years</b>	<b>Number of firms</b>	<b>Percentage</b>
2000	116	18%
2001	137	22%
2002	116	18%
2003	92	15%
2004	76	12%
2005	57	9%
2006	35	6%
Total	629	100%

**TABLE 3****Distribution of Sample Observations with Internal Control Related Fraud, by Industry**

Industries	SIC Codes	Column A	Column B	Column C	Column D
		Entire Sample	Pre-SOX	Transition	Post-SOX
		(Obs = 629)	(Obs = 269)	(Obs = 235)	(Obs = 125)
Agriculture	01	6	1	3	2
Construction	15 - 17	24	9	10	5
Finance, Insurance, and Real Estate	60 - 68	72	33	25	14
Manufacturing	20, 26 - 28, 30, 33 - 38	261	107	101	53
Mining	10, 13, 14	54	11	20	23
Retail Trade	53 - 56, 59	18	7	8	3
Services	72 - 76, 78 - 80, 87, 89	127	63	47	17
Transportation, Communications, Electric, and Gas	42, 45, 48, 49	47	30	12	5
Wholesale Trade	50, 51	20	8	9	3

The 629 observations include a total of nine industries based on the two-digit standard industrial classification (SIC). Table 3 reports a breakdown of the final sample of firms by industry. Column A shows 261 (41.49%) of the firms in the final sample are manufacturing firms. The services industry has the second largest percentage (20.19%) and includes 127 firms. The third largest industry is Finance, Insurance, and Real Estate, represented by 72 firms (11.45%). The Mining industry includes 54 firms (8.59%), while Transportation, Communication and Utilities represent 7.47% (47 firms) of the final sample. Other industries represented in the final sample are Construction with 24 firms (3.82%), Wholesale Trade with 20 firms (3.18%), Retail Trade with 18 firms (2.86%), and Agriculture with 6 firms (0.95%). The distribution of the final sample across industries as shown in Column A is consistent across Column B, the pre-SOX 404 period; Column C, the transitional period, and Column D, the post-SOX 404 period.

### *Descriptive Statistics*

The descriptive statistics by auditor litigation are shown in Table 4. Column A reports the means and standard deviations of variables for firms with fraud and auditor litigation and column B shows the corresponding summary statistics for firms with fraud and no auditor litigation. As shown in Table 4, of the 67 firms with fraud and auditor litigation (Column A), 34.3% of the instances were observed in the transition period (Trans), whereas of the 562 firms with fraud and no auditor litigation (Column B), 37.7% of the instances were observed in the transition period (Trans). This suggests a marginal difference in the mean of firms with auditor litigation in comparison to firms without auditor litigation in the transition period (Trans).

Further, 20.9% of the 67 instances of firms with auditor litigation (Column A) were observed in the Post-SOX 404 period (Post), and 19.8% of the 562 instances of firms without

auditor litigation (Column B) were observed in the Post-SOX 404 period (Post). This result also indicates a marginal difference in the mean of firms with auditor litigation in comparison to firms without auditor litigation in the Post-SOX 404 period (Post).

However, as shown in Table 4, there exists a large difference in the mean of misappropriation of assets (MOA) between firms with auditor litigation and firms without auditor litigation. Of the 67 firms with auditor litigation (Column A), 47.8% of the instances involved misappropriation of assets (MOA), whereas of the 562 firms without auditor litigation (Column B), 16.9% involved misappropriation of assets (MOA). This result suggests auditor litigation is more likely when both financial reporting fraud and misappropriation of assets occur, relative to when only financial reporting fraud occurs.

Of the 67 firms with auditor litigation (Column A), 11.9% are accelerated filers (Accel), whereas of the 562 firms without auditor litigation (Column B), 46.1% are accelerated filers (Accel). There exists a large difference in the mean of firms with auditor litigation and the mean of firms without auditor litigation, which suggests auditor litigation, is less likely for accelerated filers relative to non-accelerated filers. Further, of the 67 firms with auditor litigation, 52.2% had a Big 4 as an auditor (AUD), whereas 87.7% of the 562 firms without auditor litigation had a Big 4 as an auditor (AUD). This result suggests auditor litigation is more likely when a firm has a non-Big 4 as their auditor, relative to when a firm has a Big 4 as their auditor.

As shown in Table 4, a large difference exists in the mean of SIZE between firms with auditor litigation and firms without auditor litigation. The firms with auditor litigation have a mean of approximately 683 million dollars in total assets (SIZE) whereas the firms without auditor litigation have a mean of about 270 million dollars in total assets (SIZE), thus suggesting

auditors of larger firms are more likely to be litigated relative to auditors of smaller firms. Further, the firms with fraud showed negative return on assets (FINCOND). However, there is a large difference in the mean of return on assets (FINCOND) between firms with auditor litigation (Column A) and firms without auditor litigation (Column B). The firms with auditor litigation have a mean of 36.5% whereas the firms without auditor litigation have a mean of 2.6%, thus suggesting the weaker a firm's financial condition, the more likely auditor litigation will occur.

Similarly, a significant difference exists in the mean of NYSE between firms with auditor litigation and firms without auditor litigation. The firms with auditor litigation have a mean of 20.9% whereas the firms without auditor litigation have a mean of 50.9%, suggesting auditors of firms listed in the NYSE are less likely to be litigated relative to auditors of firms not listed in the NYSE. In addition, of the 67 firms with auditor litigation, 43.3% are closely held firms, whereas 18.7% of the 562 firms without auditor litigation are closely held. The large difference in the mean of closely held firm between firms with auditor litigation and firms without auditor litigation suggests auditor litigation is more likely when a firm is closely held, relative to when a firm is not closely held.

Table 5 reports the summary statistics, by period, for the observations included in the study. Column A shows the summary statistics for the entire 629 observations. Column B shows the summary statistics for the observations before the enactment of SOX 2002, Section 404. Column C shows the summary statistics for the observations during the transition period. Column D shows the summary statistics for the observations after the effective date of SOX 2002, Section 404. The statistics reported in column B (pre-SOX period), column C (transition period), and column D (post-SOX period) are consistent with the statistics reported in column A.

Column A shows the summary statistics for the entire period, 2000 - 2006. There were instances of auditor litigation in 10.7% of the observations. Accelerated filers (Accel) represent 42.4% of the observations, and 20.2% of the observations had misappropriation of assets (MOA). The percentage of observations with unqualified opinion on internal control over financial reporting (Aud404) was 10.5% and 41.8% of the observations were firms with management's voluntary disclosures on internal control representing effective internal controls (DC302).

With respect to the control variables, 83.9% of the firms with fraud had a Big 4 firm (AUD) as their auditor, 47.7% of the firms with fraud are listed in NYSE, and 2.4% of the observations were IPO firms. Closely held firms represent 21.3% of the observations. Further, 15.6% of the firms were in the technology industry, while 11% were in the financial industry. The firms with fraud show negative return on assets (FINCOND), and they were mostly larger firms.

Column B shows the summary statistics for the 269 observations before the enactment of SOX 2002, Section 404. There were instances of auditor litigation in 11.2% of the observations, and 20.1% of the observations had misappropriation of assets (MOA) in the Pre-SOX period observations. The mean for firms with an unqualified opinion on internal control over financial reporting (Aud404) was zero. Since auditors were not required to attest and report on internal control over financial reporting till the Post-SOX 404 period, the mean value of zero is expected for the variable, unqualified opinion on internal control over financial reporting (Aud404), in the Pre-SOX 404 period.

Accelerated filers (Accel) have a mean value of zero in the Pre-SOX period observations. The differentiation for accelerated filers was established in September 2002, which was during



the transition period. The means for accelerated filers (Accel) in the transition period (Trans) and in the Post-SOX 404 (Post) were 66.8% (Column C) and 88% (Column D), respectively. Based on the date the differentiation for accelerated filers was in effect, the significant variation in the percentages for accelerated filers in the Pre-SOX period on the one hand, and the transition period (Trans) and Post-SOX 404 period (Post) on the other hand is expected.

Further, the filing status of firms can change if the market value of their outstanding voting and non-voting shares as at the end of the second quarter of their fiscal year changes. As the market value of the shares increase, a firm can change from a non-accelerated filer to an accelerated filer and vice versa, if the market value of the shares decreases. Hence, the increase in the mean of accelerated filers (Accel) from 66.8% in the Transition period (Trans) to 88% in the Post-SOX 404 period (Post) is reasonable.

There were no observations of firms with management's voluntary disclosures on internal control (DC302) during the Pre-SOX period. The requirements under Section 302 relating to management voluntary disclosures on internal control became effective in the transition period (Trans). Based on the effective date of August 29, 2002, management voluntary disclosures in the Pre-SOX period were none existent. Therefore, the zero mean for the Pre-SOX period observations and the means of 77% (Column C) in the transition period (Trans) and 65.6% (Column D) in the Post-SOX 404 (Post) are reasonable.

With respect to the control variables, 87.4% of the firms with fraud had a Big 4 firm (AUD) as their auditor, 44.6% of the firms with fraud are listed in NYSE, and 4.1% of the observations were IPO firms. Closely held firms represent 20.4% of the observations. Further, 16.7% of the firms were in the technology industry, while 11.9% were in the financial industry.

The firms with fraud in the Pre-SOX 404 observations show negative return on assets (FINCOND) and were mostly larger firms.

Column C shows the summary statistics for the 235 observations during the transition period. There were instances of auditor litigation in 9.8% of the observations. Misappropriation of assets (MOA) was noted in 19.6% of the transition period observations. Accelerated filers (Accel) represent 66.8% of the transition period observations. The percentage of observations with unqualified opinion on internal control over financial reporting (Aud404) was 1.2% and 77% of the observations were firms with management's voluntary disclosures on internal control representing effective internal controls (DC302).

For the control variables, 85.1% of the firms with fraud had a Big 4 firm (AUD) as their auditor, 48.9% of the firms with fraud are listed in NYSE, and 1.2% of the observations were IPO firms. Closely held firms represent 22.1% of the observations. Further, 14.5% of the firms were in the technology industry, while 9.8% were in the financial industry. The firms with fraud in the transition period (Trans) sample show negative return on assets (FINCOND), and they were typically larger firms.

Column D shows the summary statistics for the 125 observations after the effective date of SOX 2002, Section 404. There were instances of auditor litigation in 11.2% of the observations. Misappropriation of assets (MOA) was noted in 21.6% of the Post-SOX 404 period observations. Accelerated filers (Accel) represent 88% of the Post-SOX 404 period observations. The percentage of observations with unqualified opinion on internal control over financial reporting (Aud404) was 50.4% and 65.6% of the observations were firms with management's voluntary disclosures on internal control representing effective internal controls (DC302).

With respect to the control variables, 74.4% of the firms with fraud had a Big 4 firm (AUD) as their auditor, 52% of the firms with fraud are listed in NYSE, and less than 1% of the Post-SOX 404 period (Post) observations were IPO firms. Closely held firms represent 21.6% of the observations. Further, 15.2% of the firms with fraud were in the technology industry, while 11.2% were in the financial industry. The firms with fraud in the Post-SOX 404 period (Post) show marginal positive return on assets (FINCOND) and they were typically larger firms. However, there is a large difference in the mean of SIZE for these firms in the Post-SOX 404 period (Column D), in comparison to the mean of SIZE of the firms in the Pre-SOX 404 period (Column B) and the transition period (Trans).

The pairwise correlations for the variables in this study are shown in Table 6. The correlations<sup>9</sup> equal to or greater than 0.4 and significant at the  $p < .01$  level are discussed below. The variable representing management's voluntary disclosures relating to internal control under Section 302 of Sarbanes Oxley Act (DC302) is positively correlated with the transitional period (Trans). The pairwise correlation value is 0.5513. Section 302 became effective on August 29, 2002, which is within the transitional period. Since, DC302 (management's voluntary disclosures relating to internal control) reflects compliance with the requirement, the positive correlation with Trans is not unexpected.

Post-SOX 404 period (Post) is positively correlated (0.4590) with accelerated filers (Accel). The positive correlation between Post-SOX 404 period (Post) and accelerated filers

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<sup>9</sup> Significant correlations involving interaction variables and the individual component variables are not explained.

**Table 4**  
**Descriptive Statistics By Auditor Litigation**

Variable	Column A Firms with auditor litigation		Column B Firms without auditor litigation	
	Mean	Std. Dev	Mean	Std. Dev
Trans	0.343	0.478	0.377	0.485
Post	0.209	0.410	0.198	0.398
MOA	0.478	0.503	0.169	0.375
Accel	0.119	0.327	0.461	0.499
Aud404	0.045	0.208	0.112	0.316
DC302	0.299	0.461	0.432	0.496
AUD	0.522	0.503	0.877	0.328
SIZE*	683.171	3370.000	270.211	1160.000
LNSIZE	5.952	2.703	7.201	1.085
FINCOND	-0.365	1.551	-0.026	0.766
Technology	0.179	0.386	0.153	0.360
Financial	0.119	0.327	0.109	0.311
NYSE	0.209	0.410	0.509	0.500
CloselyHeld	0.567	0.499	0.813	0.390
IPO	0.075	0.265	0.018	0.132
<b>N</b>	<b>67</b>		<b>562</b>	

\* SIZE is in millions of dollars.

**Table 5**  
**Descriptive Statistics By Period**

Variable	Column A Overall		Column B Pre-Sox 404		Column C Transition		Column D Post-Sox 404	
	Mean	Std. Dev	Mean	Std. Dev	Mean	Std. Dev	Mean	Std. Dev
AUDLIT	0.107	0.309	0.112	0.315	0.098	0.298	0.112	0.317
MOA	0.202	0.402	0.201	0.401	0.196	0.398	0.216	0.413
Accel	0.424	0.495	0.000	0.000	0.668	0.472	0.880	0.326
Aud404	0.105	0.307	0.000	0.000	0.012	0.113	0.504	0.502
DC302	0.418	0.494	0.000	0.000	0.770	0.422	0.656	0.477
AUD	0.839	0.367	0.874	0.333	0.851	0.357	0.744	0.438
SIZE*	314.199	1550.000	363.983	1880.000	318.126	1370.000	199.680	975.000
LNSIZE	7.068	1.403	7.083	1.559	7.033	1.388	7.100	1.035
FINCOND	-0.062	0.887	-0.061	0.860	-0.101	0.880	0.008	0.960
Technology	0.156	0.363	0.167	0.374	0.145	0.353	0.152	0.360
Financial	0.110	0.313	0.119	0.324	0.098	0.298	0.112	0.317
NYSE	0.477	0.500	0.446	0.498	0.489	0.501	0.520	0.502
CloselyHeld	0.787	0.410	0.796	0.404	0.779	0.416	0.784	0.413
IPO	0.024	0.153	0.041	0.198	0.013	0.113	0.008	0.089
<b>N</b>	<b>629</b>		<b>269</b>		<b>235</b>		<b>125</b>	

\* SIZE is in millions of dollars.

**TABLE 6**  
**Correlations matrix**

	AUDLIT	Trans	Post	MOA	MOATrans	MOAPost
AUDLIT	1.0000					
Trans	-0.0216	1.0000				
Post	0.0088	-0.3846***	1.0000			
MOA	0.2371***	-0.0119	0.0175	1.0000		
MOATrans	0.1010**	0.3637***	-0.1399***	<b>0.5585***</b>	1.0000	
MOAPost	0.1303***	-0.1636***	<b>0.4252***</b>	<b>0.4210***</b>	-0.0595	1.0000
Accel	-0.2131***	0.3806***	<b>0.4590***</b>	-0.1115***	0.0306	0.1038**
Aud404	-0.0678*	-0.2323***	<b>0.6485***</b>	-0.0430	-0.0962**	0.1834***
DC302	-0.0837***	<b>0.5513***</b>	0.2402***	0.0313	0.2447***	0.1067**
AUD	-0.2982***	0.0245	-0.1294***	-0.2331***	-0.1433***	-0.2278***
LNSIZE	-0.2749***	-0.0191	0.0115	-0.1817***	-0.1342***	-0.0627
FINCOND	-0.1177***	-0.0337	0.0392	-0.0889**	-0.1222***	-0.0528
Technology	0.0222	-0.0237	-0.0052	-0.0632	-0.0870*	-0.0477
Financial	0.0107	-0.0292	0.0037	-0.0118	-0.0595	-0.0241
NYSE	-0.1853***	0.0192	0.0429	-0.1711***	-0.0848**	-0.0923**
CloselyHeld	-0.1853***	-0.0155	-0.0036	-0.1155***	-0.0626	-0.1197***
IPO	0.1149***	-0.0561	-0.0517	0.0252	-0.0439	-0.0331

Note 1: \*, \*\*, and \*\*\* indicate significance at the 0.10, 0.05, and 0.01 levels, respectively.

Note 2: Using a cut-off of 0.4 (absolute), all significant correlations equal to or greater than 0.4 (absolute) are in bold.

**TABLE 6 (cont.)**  
**Correlations matrix**

	Accel	Aud404	DC302	AUD	LNSIZE	FINCOND
AUDLIT						
Trans						
Post						
MOA						
MOATrans						
MOAPost						
Accel	1.0000					
Aud404	0.3672***	1.0000				
DC302	<b>0.6153***</b>	0.3829***	1.0000			
AUD	0.1829***	0.0367	0.0020	1.0000		
LNSIZE	0.1768***	0.0821**	0.0062	<b>0.4611***</b>	1.0000	
FINCOND	0.1325***	0.0613	0.0091	0.2772***	0.1755***	1.0000
Technology	0.0302	-0.0040	0.0180	0.0924**	-0.0741*	0.0205
Financial	0.0073	0.0624	0.0119	0.0427	0.2052***	0.0393
NYSE	0.2103***	0.0989**	0.0746*	0.3570***	<b>0.4393***</b>	0.1581***
CloselyHeld	0.1797***	0.0768*	0.0238	0.2801***	0.2995***	0.1708***
IPO	-0.0710**	-0.0535	-0.0691**	-0.0168	-0.0937**	-0.0057

Note 1: \*, \*\*, and \*\*\* indicate significance at the 0.10, 0.05, and 0.01 levels, respectively.

Note 2: Using a cut-off of 0.4 (absolute), all significant correlations equal to or greater than 0.4 (absolute) are in bold.

**TABLE 6 (cont.)**  
**Correlations matrix**

	Technology	Financial	NYSE	CloselyHeld	IPO
AUDLIT					
MOA					
Trans					
Post					
MOATrans					
MOAPost					
Accel					
Aud404					
DC302					
AUD					
LNSIZE					
FINCOND					
Technology	1.0000				
Financial	-0.1508***	1.0000			
NYSE	-0.2523***	0.0926**	1.0000		
CloselyHeld	-0.0120	0.1578***	0.3647***	1.0000	
IPO	0.1627***	-0.0549	-0.1075***	-0.0205	1.0000

Note 1: \*, \*\*, and \*\*\* indicate significance at the 0.10, 0.05, and 0.01 levels, respectively.

Note 2: Using a cut-off of 0.4 (absolute), all significant correlations equal to or greater than 0.4 (absolute) are in bold.



(Accel) is consistent with the requirement for accelerated filers to comply with Section 404 on their first fiscal year ending on or after November 15, 2004. In addition, auditor's report on internal control over financial reporting (Aud404) is positively correlated (0.6485) with Post-SOX 404 period (Post). This reflects the requirement of Section 404(b) of Sarbanes-Oxley Act 2002, which specifies that "with respect to the internal control assessment required by subsection (a), each registered public accounting firm that prepares or issues the audit report for the issuer shall attest to, and report on, the assessment made by the management of the issuer" (US Congress, 107 H.R. 3763). Hence, the positive correlation between Aud404 and Post is reasonable.

The variable representing management's voluntary disclosures relating to internal control under section 302 of Sarbanes Oxley Act (DC302) is positively correlated with accelerated filers (Accel). The pairwise correlation value is 0.6153. Under Section 302, management makes voluntary disclosures about the internal control, and prior research (Francis et al., 2004 and 2005; Ogneva et al., 2007; Ashbaugh-Skaife et al. 2007) has shown the financial market responds to more voluntary disclosures. Since, accelerated filers (Accel) are heavily traded in the financial market, the positive correlation between management's voluntary disclosures relating to internal control (DC302) and accelerated filers (Accel) is reasonable.

Auditor type (AUD) is positively correlated with size (LNSIZE). The pairwise correlation value is 0.4611, and it indicates a high percentage of the large publicly traded companies are audited by the Big 4 audit firms. Also, size (LNSIZE) is positively correlated (0.4393) with NYSE, and indicates large publicly traded companies are generally listed on the NYSE. This appears reasonable since the assets and equity test is one of the options to satisfy the NYSE financial standards requirement in listing process. The assets and equity test requires firms have:

(i) at least \$150,000,000 in global market capitalization, and (ii) at least \$75,000,000 in total assets together with at least \$50,000,000 in stockholders' equity<sup>10</sup>.

## Results for Hypotheses

This study investigates the change in auditor litigation in the post-Sarbanes Oxley period, and evaluates not only the direction of the association (sign) and the significance of the test statistic, but also, the change in the probability of auditor litigation (AUDLIT) when one of the variables changes by one unit (Long and Freese, 2006)<sup>11</sup>. Table 7 presents the results of the cross-sectional logit analysis.

The Wald Chi-squared statistic as shown in the bottom of Table 7 is statistically significant at the p-value < 0.01 level. The estimated coefficient (1.3615) and the marginal effect of the transition period (Trans) are each positive and statistically significant at the p<.05 level. The estimate of the marginal effect for the transition period (Trans) dummy variable is 0.1123 meaning, relative to the Pre-SOX period, probability of auditor litigation increases by 11.23 percentage points in the transition period (Trans). Also, the estimate of the marginal effect for the Post-SOX 404 period (Post) dummy variable is 0.2113 meaning, relative to the Pre-SOX period, probability of auditor litigation increases by 21.13 percentage points in the Post-SOX 404 period. The coefficient (1.9884) for Post-SOX 404 period (Post) is positive and statistically significant at the p<0.01 level. The, marginal effect of Post-SOX 404 is statistically significant at the p<0.05 level, and the results for Post-SOX 404 period support the first hypothesis (H1) which

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<sup>10</sup> Source: Section 1: The Listing Process; Listed Company Manual. <http://nysemanual.nyse.com> [Accessed January 15, 2012].

<sup>11</sup> The average marginal effect of an interaction variable is non-existent. The average marginal effects that exist are those of the underlying components of the interaction variable.

is, in the post-Sarbanes Oxley 404 period, auditors are more likely to experience higher litigation due to internal control related fraud.

The estimated coefficient for misappropriation of assets (MOA) is 1.1496. The coefficient is positive and statistically significant at the  $p < 0.01$  level. The marginal effect of misappropriation of assets (MOA) is positive and statistically significant at the  $p < 0.01$  level. The estimate of the marginal effect for misappropriation of assets (MOA) dummy variable is 0.091 meaning, relative to instances where only financial reporting fraud occurs, the probability of auditor litigation (AUDLIT) increases further by 9.1 percentage points when both financial reporting fraud and misappropriation of assets occur.

The estimated coefficients for the variables, misappropriation of asset in transition period (MOATrans) and misappropriation of asset in Post-SOX 404 period (MOAPost) are negative and statistically insignificant. Though the coefficient of misappropriation of assets (MOA) is positive and statistically significant, the results for the interaction variables, misappropriation of asset in transition period (MOATrans) and misappropriation of asset in Post-SOX 404 period (MOAPost), suggest misappropriation of assets (MOA) has a smaller effect on the probability of auditor litigation in the transition (Trans) and Post-SOX 404 (Post) periods, than on the probability of auditor litigation in the pre-SOX 404 period. The result for misappropriation of asset in Post-SOX 404 period (MOAPost) appears not to support the second hypothesis (H2), which is, the probability of auditors being litigated for internal control related fraud in the Post-SOX 404 period increasing in the presence of misappropriation of assets.

The result indicates accelerated filers (Accel) have an estimated coefficient of -2.0748, which is statistically significant at the  $p < 0.01$  level. The marginal effect of accelerated filers (Accel) is negative and statistically significant at the  $p < 0.01$  level. The estimate of the marginal

**TABLE 7*****Results from Cross-Sectional Logit Model***

The table reports the coefficient estimates and z-statistics from the cross-sectional logit regression of the research model. A positive coefficient indicates a higher probability of auditor litigation. The table also reports the marginal effect, which is the change in the probability of auditor litigation given a change in an independent variable.

Variable	Expected Sign	Estimated Coefficient	Z- Statistic (p-value)	Marginal Effect	Z- Statistic (p-value)
Trans	?	1.3615	2.45** (0.014)	0.1123	1.98* (0.047)
Post	+	1.9884	2.79*** (0.005)	0.2113	2.31** (0.021)
MOA	+	1.1496	2.68*** (0.007)	0.0911	2.71*** (0.007)
MOATrans	+	-0.3308	-0.39 (0.695)	a	a
MOAPost	+	-0.1407	-0.15 (0.878)	a	a
Accel	-	-2.0748	-3.71*** (0.000)	-0.1361	-3.66*** (0.000)
Aud404	+	-0.1640	-0.18 (0.861)	-0.0116	-0.18 (0.855)
DC302	-	-0.9128	-1.87* (0.061)	-0.0610	-2.00** (0.046)
AUD	?	-0.7029	-1.69* (0.092)	-0.0597	-1.47 (0.142)
LNSIZE	+	-0.1908	-1.79* (0.073)	-0.0141	-1.86* (0.062)
FINCOND	+	-0.0011	-0.01 (0.988)	-0.0001	-0.01 (0.988)

\*, \*\*, \*\*\* indicate two tail significance at .10, .05, and .01 levels, respectively.

<sup>a</sup> Estimating margin effects for an interaction variable is not possible. Marginal effect estimate of an interaction variable is the marginal estimate of the component variables. Hence, marginal effect is not reported for any interaction variable.

**TABLE 7 (Cont.)*****Results from Cross-Sectional Logit Model***

Variable	Expected Sign	Estimated Coefficient	Z-Statistic (p-value)	Marginal Effect	Z-Statistic (p-value)
Technology	?	0.4222	1.05 (0.296)	0.0339	0.98 (0.327)
Financial	?	0.7337	1.51 (0.130)	0.0635	1.31 (0.189)
NYSE	?	-0.0831	-0.21 (0.831)	-0.0061	-0.21 (0.831)
CloselyHeld	-	-0.2886	-0.80 (0.424)	-0.0224	-0.76 (0.446)
IPO	+	1.2924	2.24** (0.025)	0.1326	1.72* (0.085)
Constant	?	-0.5713	-0.76 (0.446)		
N		629			
Wald Chi-squared statistic		93.51			
p-value		0.0000			
Pseudo R <sup>2</sup>		0.2409			

\*, \*\*, \*\*\* indicate two tail significance at .10, .05, and .01 levels, respectively.

effect for accelerated filers (Accel) is -0.1361 and means, relative to non-accelerated filers, probability of auditor litigation (AUDLIT) decreases by 13.61 percentage points for accelerated filers. The result provides support for the third hypothesis (H3) which is, non-accelerated filers are more likely to have higher auditor litigation due to internal control related fraud than accelerated filers.

The estimated coefficient and the marginal effect of auditor's unqualified opinion for internal control over financial reporting (AUD404) are negative and statistically insignificant.

This result does not provide support for the fourth hypothesis (H4) that auditors are more likely

to experience litigation due to internal control fraud in the presence of an unqualified opinion for internal control over financial reporting. However, the result shows the estimated coefficient and marginal effect of management voluntary disclosures relating to internal control (DC302) are negative and statistically significant at  $p < .1$  level and  $p < .05$  level, respectively.

The estimate of the marginal effect for management voluntary disclosures relating to internal control (DC302) is -0.0610 and implies, relative to firms with management voluntary disclosures relating to internal control indicating ineffective internal controls, that the probability of auditor litigation (AUDLIT) decreases by 6.1 percentage points for firms with management voluntary disclosures relating to internal control indicating effective internal controls (DC302). This result supports the fifth hypothesis (H5).

The findings show the coefficient for auditor type (AUD) is negative, and the statistical significance is marginal at the  $p < .1$  level. The marginal effect for auditor type (AUD) is negative and statistically insignificant at the conventional levels. Additionally, the result show the estimated coefficient and marginal effect of size (LNSIZE) are negative and statistically significant at the  $p < .1$  level. The estimate of the marginal effect of firm size (LNSIZE) implies a 1% increase in firm size (LNSIZE) results in a 1.4% decrease in the probability of auditor litigation (AUDLIT).

The result also shows a positive coefficient for initial public offering firms (IPO). The estimated coefficient is statistically significant at the  $p < .05$  level. The marginal effect for initial public offering firms (IPO) is positive and statistically significant at the  $p < .1$  level. The estimate of the marginal effect for initial public offering firms (IPO) is 0.1326 and implies, relative to non-IPO firms, the probability of auditor litigation (AUDLIT) increases by 13.26 percentage points for initial public offering firms (IPO).

The estimated coefficients and marginal effects for the technology industry (Technology) and the financial industry (Financial) are all positive and statistically insignificant at the conventional levels. Similarly, the results show the estimated coefficients and marginal effects for financial condition (FINCOND), stock exchange (NYSE) and closely held firms (CloselyHeld) are negative and statistically insignificant at the conventional levels. The results suggest financial condition (FINCOND), industry, stock exchange listing and firms being closely held, may not affect the likelihood of auditor litigation.

Overall, auditor litigation seems to be lower for accelerated filers (Accel) and firms with management's voluntary disclosures indicating effective internal control (DC302). The odds ratio for the dummy variable accelerated filers (Accel) in the Post-SOX 404 period is 0.92 ( $=\exp(-2.0748)*\exp(1.9884)$ ), meaning auditor litigation is about 8% lower for accelerated filers. Also, in the Post-SOX 404 period, the odds ratio for firms with management's voluntary disclosures indicating effective internal control (DC302) is 2.93 ( $=\exp(-0.9128)*\exp(1.9884)$ ). The odds ratios in the Post-SOX 404, for accelerated filers (Accel) and firms with management's voluntary disclosures indicating effective internal control (DC302) are much lower than the odds ratio of 7.3 ( $=\exp(1.9884)$ ), for firms that are neither accelerated filers nor firms with management's voluntary disclosures indicating effective internal control.

### **Supplementary Analysis**

Sarbanes-Oxley Act was enacted in July 2002, and though the effective date for Section 404 was in November 2004, firms and their auditors began making changes to comply with the requirements of SOX 404 long before the effective date. An indication of the effect of these changes to comply with the requirement of SOX 404 is observed in the decrease in instances of internal control fraud in the transition and Post-SOX 404 periods (see Table 2). Therefore, this

**TABLE 8*****Supplementary Analysis***

The table reports the coefficient estimates and z-statistics from the cross-sectional logit regression. A positive coefficient indicates a higher probability of auditor litigation. The table also reports the marginal effect, which is the change in the probability of auditor litigation given a change in an independent variable.

Variable	Expected Sign	Estimated Coefficient	Z-Statistic (p-value)	Marginal Effect	Z-Statistic (p-value)
After	+	1.4408	2.76*** (0.006)	0.1132	2.46** (0.014)
MOA	+	1.1438	2.66*** (0.008)	0.0942	2.77*** (0.006)
MOAAfter	+	-0.1939	-0.27 (0.791)	a	a
Accel	-	-1.8310	-3.33*** (0.001)	-0.1214	-3.35*** (0.001)
Aud404	+	0.2443	0.34 (0.737)	0.0193	0.32 (0.752)
DC302	-	-0.9955	-2.06** (0.040)	-0.0673	-2.18** (0.029)
AUD	?	-0.8235	-2.01** (0.045)	-0.0720	-1.71* (0.088)
LNSIZE	+	-0.1846	-1.76* (0.078)	-0.0137	-1.83* (0.067)
FINCOND	+	0.0060	0.08 (0.935)	0.0004	0.08 (0.935)

\*, \*\*, \*\*\* indicate two tail significance at .10, .05, and .01 levels, respectively.

<sup>a</sup> Estimating margin effects for an interaction variable is not possible. Marginal effect estimate of an interaction variable is the marginal estimate of the component variables. Hence, marginal effect is not reported for any interaction variable.



**TABLE 8 (Cont.)***Supplementary Analysis*

Variable	Expected Sign	Estimated Coefficient	Z-Statistic (p-value)	Marginal Effect	Z-Statistic (p-value)
Technology	?	0.4452	1.15 (0.252)	0.0360	1.07 (0.285)
Financial	?	0.7145	1.46 (0.145)	0.0618	1.27 (0.204)
NYSE	?	-0.0686	-0.18 (0.859)	-0.0051	-0.18 (0.859)
CloselyHeld	-	-0.3371	-0.94 (0.345)	-0.0264	-0.89 (0.372)
IPO	+	1.3222	2.21** (0.027)	0.1371	1.69* (0.091)
Constant	?	-0.4908	-0.67 (0.506)		
N		629			
Wald Chi-squared statistic		96.98			
p-value		0.0000			
Pseudo R <sup>2</sup>		0.2367			

\*, \*\*, \*\*\* indicate two tail significance at .10, .05, and .01 levels, respectively.

section presents the result of the logit analysis for an alternative specification, when the period after Sarbanes Oxley is defined to include both the transitional period and the Post-SOX 404 period. By investigating this alternative specification, this study is able to determine the effect of SOX 2002 since its enactment on auditor litigation.

The period after Sarbanes Oxley is represented by the variable “After.” The Wald Chi-squared statistic as shown in the bottom of Table 8 is statistically significant at the p-value < 0.01 level. The estimated coefficient (1.4408) and the marginal effect of the period after Sarbanes Oxley (After) are positive and statistically significant at the p<.01 level and p<.05

level, respectively. The estimate of the marginal effect for the period after Sarbanes Oxley (After) is 0.1132 meaning, relative to the period before Sarbanes Oxley, the probability of auditor litigation increases by 11.32 percentage points, in the period after the enactment of Sarbanes Oxley. This result is consistent with the estimate of Post-SOX 404 period (Post) in the research model.

Additionally, Table 8 shows the estimated coefficient of misappropriation of assets (MOA) is positive and statistically significant at the  $p < 0.05$  level. The estimate of the marginal effect for misappropriation of assets (MOA) dummy variable is 0.0942 and means, relative to instances where only financial reporting fraud occurs, the probability of auditor litigation (AUDLIT) increases further by 9.42 percentage points when both financial reporting fraud and misappropriation of assets occur. This result is consistent with the estimate obtained for misappropriation of assets (MOA) in the research model.

Further, accelerated filers (Accel) have an estimated coefficient of -1.8310, which is statistically significant at the  $p < 0.01$  level. The marginal effect of accelerated filers (Accel) is negative and statistically significant at the  $p < 0.01$  level. The estimate of the marginal effect for accelerated filers (Accel) is -0.1214 and means, relative to non-accelerated filers, probability of auditor litigation (AUDLIT) decreases by 12.14 percentage points for accelerated filers. This result is also consistent with the estimate of accelerated filers (Accel) in the research model.

The results show the estimated coefficient and the marginal effect of auditor's unqualified opinion for internal control over financial reporting (AUD404) are positive and statistically insignificant. The estimated coefficient and marginal effect are in the expected direction suggesting a possible increase in the probability of auditor litigation (AUDLIT) in the presence of unqualified opinion for internal control over financial reporting (AUD404). Though

the signs of the estimated coefficient and marginal effects in the alternative specification are in the opposite direction to the signs obtained in the research model, all the estimates are statistically insignificant at the conventional levels.

The result shows the estimated coefficient (-0.9955) and marginal effect of management voluntary disclosures relating to internal control (DC302) are negative and statistically significant at  $p < .05$  level. The estimate of the marginal effect for management voluntary disclosures relating to internal control (DC302) is -0.0673 and implies, relative to firms with management voluntary disclosures relating to internal control indicating ineffective internal controls, that the probability of auditor litigation (AUDLIT) decreases by 6.73 percentage points for firms with management voluntary disclosures relating to internal control indicating effective internal controls (DC302). This result is also consistent with the estimate of management voluntary disclosures relating to internal control indicating effective internal controls (DC302) in the research model.

Additionally, as indicated in Table 8, the marginal effect for auditor type (AUD) is negative and statistically significant at the  $p < .1$  level. The estimate of the marginal effect for auditor type (AUD) is -0.0720 and means, relative to non-Big 4 audit firms, the probability of auditor litigation (AUDLIT) decreases by 7.2 percentage points for Big 4 audit firms. This result is not consistent with the result obtained from the research model.

The result show the estimated coefficient and the marginal effect of firm size (LNSIZE) are negative and statistically significant at the  $p < .1$  level. The estimate of the marginal effect of firm size (LNSIZE) suggests a 1% increase in firm size (LNSIZE) results in a 1.4% decrease in the probability of auditor litigation (AUDLIT). This result is also consistent with the estimate of firm size (LNSIZE) in the research model.

The result also shows a positive coefficient for initial public offering firms (IPO). The estimated coefficient is statistically significant at the  $p < .05$  level. The marginal effect for initial public offering firms (IPO) is positive and statistically significant at the  $p < .1$  level. The estimate for the marginal effect for initial public offering firms (IPO) is 0.1371 and implies, relative to non-IPO firms, the probability of auditor litigation (AUDLIT) increases by 13.71 percentage points for initial public offering firms (IPO). This result is also consistent with the estimate of initial public offering firms (IPO) in the research model.

The estimates for the variables of interest in the alternative specification are fairly consistent with the estimates obtained from the research model. Therefore, the conclusions about the variables of interest appear to be robust to the alternative specification.

## V. Conclusions

The current study examines the change in auditor litigation due to internal control fraud, using 629 observations of fraud firms across the period 2000 through 2006. Prior studies have examined auditor litigation, but few, if any, have investigated the change in auditor litigation since Sarbanes Oxley section 404 became effective. Generally, the study hypothesizes that auditor litigation due to internal control fraud increased in the post-Sarbanes Oxley 404 period.

The results of the study shows in the Post-SOX 404 period, the likelihood of auditor litigation due to internal control fraud increases. The study provides no support for further increases in the likelihood of auditor litigation when both misappropriation of assets and financial reporting fraud occur, in the Post-SOX 404 period. In addition, the result suggests the likelihood of auditor litigation decreases for accelerated filers, and similarly, the findings indicate a decrease in the likelihood for auditor litigation for firms with management voluntary disclosures representing effective internal control. The study provides no support for an increase in the likelihood of auditor litigation in the presence of unqualified auditor's opinion on internal control over financial reporting, when fraud occurs.

Regulators should find these results relevant when evaluating the effect of Sarbanes Oxley 2002, Section 404 especially, as it relates to corporate responsibilities, fraud deterrence, and accountability. Moreover, the results of this study suggest a continued increase in the enforcement of accountability for Sarbanes Oxley 2002, Section 404 through SEC's oversight activities.

External auditors should find the results of this study relevant, as it further emphasizes the need for professional skepticism, and adequate attention to warning signs and fraud risks. The increase in the likelihood of auditor litigation related to internal control frauds, as reflected in the results of this study should motivate auditors towards performing audits that are thorough even though they may involve additional substantive testing and cost.

This study makes several contributions to literature. First, the study extends the literature on Sarbanes Oxley Act of 2002 by investigating its effect on auditor litigation. The results of the study provide some insight to how auditor litigation due to internal control fraud has changed since the effective date of Sarbanes-Oxley 202, Section 404. Second, procedural justice theory, is used in framing the theoretical structure of this study, and prior to this current study, very little prior literature have applied procedural justice theory in the investigation of auditor litigation. Third, the current study indicates the need for external auditors to reassess their current audit procedures to ensure loopholes in the assessment of the client's internal control over financial reporting are eliminated.

### **Limitations**

Data for this study is limited by time since investigation of some of the fraud litigation cases observed (particularly the post-SOX 2002, Section 404 cases) are still on going. Also, from a review of the data, it appears there exists a considerable time lapse between the occurrence of fraud and the time firms and their auditors or firms or their auditors are litigated by the SEC. As such, not all instances of fraud that occurred within the relevant period of this study have been made public by an SEC enforcement.

Nonetheless, this study notes the statute of limitations exists for bringing lawsuits against firms, auditors, or both. According to Section 804 of the Sarbanes Oxley Act of 2002 – Statute of

Limitation for Securities Fraud - “a claim of fraud, deceit, manipulation, or contrivance in contravention of a regulatory requirement concerning the securities laws under the Securities Exchange Act of 1934, may be brought not later than the earlier of: “(1) two years after the discovery of the facts constituting the violation; or (2) five years after such violation.”<sup>12</sup>

Therefore, since data for this study was collected from 2000 to 2011 (second quarter), it appears the period covered is at the tail end of the five years after a violation, particularly for violations which occurred in 2006.

The sample for this study includes firms listed in the U.S. exchanges. Some of these firms trade in foreign markets, and the requirements of stock exchanges across the globe differ much like accounting and auditing standards differ across borders. Though some countries have established their country’s SOX, which for the most part are adaptations of the U.S. SOX, the results of this study may still not be broadly globe generalizable.

Certain events occurred around the enactment of Sarbanes Oxley 2002, which may have an impact on the behavior of auditors during the research investigation time period. For instance, one of the then Big 5 audit firms collapsed with the Enron debacle. The effect (e.g. improvement in audit procedures, more training) of the collapse of the Big 5 firm on other audit firms cannot be easily measured, and was not captured in the model of this study.

### **Opportunities for Future Research**

The current study examines the change in auditor litigation due to internal control fraud in the Post-SOX 2002, Section 404 period. The focus was on auditors being litigated by the SEC. This study did not investigate penalty imposed by the SEC on auditors or audit firms for sub-standard audits. Some prior studies have focused on monetary penalty imposed by the SEC,

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<sup>12</sup> One hundred seventh congress of the United States of America, at the second session begun and held on the twenty-third day of January, two thousand and two.

but have not addressed the non-monetary penalties imposed by the SEC to a great extent. Future research in the change in non-monetary penalty (i.e. length of time license is suspended, jail time) imposed by the SEC on auditors for internal control fraud should be explored.

Investigating the change in non-monetary penalty will provide the following benefits: (1) determining if the change in auditor litigation reported in the results of this study are associated with the change in penalty (monetary or non-monetary); and (2) determining which penalty type (monetary or non-monetary) is a more effective deterrent, especially since the non-monetary penalty are uninsurable unlike the monetary penalty.



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## Vita

Ifeoma Azuka Udeh was born on March 17, 1979 in Enugu State, Nigeria. She graduated from Ekulu Primary School, Enugu in 1990 and from Federal Government College, Enugu in 1996. She holds a Bachelor of Science in Accountancy (2000) from Abia State University, Nigeria, a Master of Business Administration (2004) and a Master of Accountancy (2005) both from Virginia Commonwealth University. In 2007, Ifeoma entered the Ph.D. in Business program at Virginia Commonwealth University (VCU). She completed the requirements for a Doctorate in Business with a major in Accounting and a minor in Security, Assurance and Risks in 2012.

Ifeoma's work experience began with the Accounting Department of the University of Nigeria Teaching Hospital, Enugu in 2002 and continued in Oceanic Bank (International) Limited until August 2003 when she relocated to the United States. In 2006, Ifeoma accepted an auditor position with Deloitte & Touché, LLP, and in 2008 she continued her career as an auditor with Goodman & Company, L.L.P (now Dixon Hughes Goodman, LLP). She was employed by the latter until August 2011, when she accepted a position, as an Assistant Professor in the Department of Accounting and Finance at Virginia State University.