Section 404 of the Sarbanes-Oxley Act's Shortcomings and Inabilities

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Abstract

The purpose of this research study was to find out what could explain Section 404's shortcomings and inability to effectively and efficiently govern firms' internal controls over financial reporting. This policy research study used process tracing to test the observable implications of three potential explanations. Three forms of data were triangulated: investor surveys, SEC and PCAOB press releases containing auditing instructions, and thirty corporate 10-K forms. Of the 10-K form filings for the fiscal year ended in 2022 and made available in 2023, I randomly selected a list of 30 to analyze. Market capitalization and industry was researched to ensure the sample was broadly representative, My analysis of the data found that explanations - related to the ambiguity of the reporting standards and the inadequacies of the mandated approach to risk management - were better supported than compliance costs in explaining the shortcomings with the policy under Section 404. Both the ambiguity of auditing standards and regulations not being risk based can be proved but there is insufficient evidence to support the third explanation of compliance costs. Despite corporate and industry complaints, my analysis could not find much or substantial evidence to warrant and support the third explanation that the regulation of section 404 is too costly to comply with. By considering the explanations of Section 404’s shortcomings and inabilities, it is recommended that the law be changed to require companies to report on key performance indicators.

I. Introduction and Research Question

In 2001, the financial collapse and bankruptcy of the Enron Corporation caused widespread distrust in corporate accounting practices. Enron was found to have misled both investors and regulators through fake holdings and off-the-book accounting practices. In addition, Enron had been inflating its income by about $586 million[1] since 1997[2] until its fatal collapse[3]. During its bankruptcy, Enron ended up paying its creditors more than $21.8 billion from 2004 to 2012. Due to what happened with the Enron scandal, the United States of America passed the Sarbanes Oxley Act of 2002 to regulate the accounting practices of corporations as well as to make sure that companies establish and maintain effective internal controls over financial reporting. Financial laws aimed at regulating how major corporations implement internal controls over financial reporting are a crucial part of the SEC's role in financial regulation. Making sure corporations have accurate and reliable financial reports, not only benefits the United States federal government, but public investors as well. It would benefit the United States federal government because it could help them catch white collar criminals who commit fraud much quicker and control the damage caused by fraud being committed. Strong financial regulation also benefits citizens who invest for capital gains and passive income. Finally, such regulation benefits people who are currently in retirement and those planning to retire with Investment Retirement Accounts, ROTH IRAs, 457 Horizons plans, 401Ks, and other

[1] "Enron Corp. reduced its previously reported net income dating back to 1997 by $586 million, or 20%, mostly due to improperly accounting for its dealings with partnerships run by some company officers"(Emshwiller et al., pg. 1).
[2] It is important to note that "derivatives are complex financial contracts that are represented under (1) price of commodities, (2) stocks, and (3) bonds. In addition, the derivatives were managed by sophisticated investors in the market and the manipulation occurred internally and externally on Enron's organizational environment by trading big portions of revenues. For example, in 2000, Enron reported more than $16 billion in gain from derivatives. Additionally, since 1997, Enron traders had planned out the manipulation of derivatives in the utility financial market industry with the intent to hide losses"(Lemus, pg. 2)
[3] This was seen "as other utilities entered the market for national and international wholesale sales of electricity, however, Enron lost its dominant position and its ability to post the double-digit earnings growth and resulting share price increases its investors, employees, officers, and Board had come to expect"(Jennings, pg. 172)

individual retirement or investment accounts[4]. Overall, accurate and reliable financial reporting through assessing internal controls has a chain effect on economies. This is seen as "good quality audits are integral to the smooth operation of any modern economy"(Seabroke et al., pg. 8). This is incredibly important[5] to heavily industrialized and urban states, especially when considering job loss. This applies to places such as Texas, California, Florida, New York, Illinois, Washington, Massachusetts, and Delaware.

Under the Sarbanes-Oxley Act (also known as SOX), companies may be sued or fined heavily up to millions of dollars if they are found to have deficient controls that facilitate financial fraud or unethical financial accounting procedures to occur. Section 404 is the part of the Sarbanes Oxley Act that focuses and governs companies' internal control over financial reporting. Section 404 of the Sarbanes - Oxley Act of 2002, states:

"SEC. 404. {15 U.S.C. 7262} MANAGEMENT ASSESSMENT OF INTERNAL CONTROLS.

(a) RULES REQUIRED.—The Commission shall prescribe rules requiring each annual report required by section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)) to 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

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[4] As sometimes observed, "investing in risky projects increases the likelihood that SOX-compliant firms compromise their internal control systems and disclose material weakness in their management reports, which can trigger a stock price decline or litigation" (Albuquerque and Lei Zhu, pg. 1)

[5] "6.28.1 To construct audit as a public interest issue, there needs to be a focal point; so that audit becomes a prism through which people understand aspects of their own lives. The link between lost jobs, inequality and audit failure needs to be made"(Seabrooke et al., pg. 40).

(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.

(b) INTERNAL CONTROL EVALUATION AND REPORTING.—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, other than an issuer that is an emerging growth company (as defined in section 3 of the Securities Exchange Act of 1934), shall attest to, and report on, the assessment made by the management of the issuer. An attestation made under this subsection shall be made in accordance with standards for attestation engagements issued or adopted by the Board. Any such attestation shall not be the subject of a separate engagement.
(c) EXEMPTION FOR SMALLER ISSUERS.—Subsection (b) shall not apply with respect to any audit report prepared for an issuer that is neither a ''large accelerated filer'' nor an ''accelerated filer'' as those terms are defined in Rule 12b–2 of the Commission (17 C.F.R. 240.12b–2). " Every publicly traded corporation is required to comply with section 404 compliance by filing an annual and public corporate 10-K form with the United States Securities and Exchange Commision. Within a 10-K form, a corporation must discuss how it assessed internal controls over financial reporting as well as risks and other financial disclosures.

While passing the entire Sarbanes Oxley Act of 2002 had good intentions[6] and definitely improved corporate regulation, the requirements set forth by section 404 have not eliminated the possibility investors being misled. The United States Securities and Exchange Commission has filed civil charges with companies even after 2002 for failing to maintain effective internal

[6] This is important as "one of the most important components of SOX is Section 404 (SOX404), which is arguably the most contentious and onerous section of the act (Coates and Srinivasan, 2014, and Zhang, 2007). Congress's objective in creating SOX404 was to increase the reliability of financial statements in order to prevent accounting fraud"(Albuquerque and Lei Zhu, pg. 1).

control over financial reporting for multiple years. The Securities and Exchange Commission ended up settling with those companies, yet some of those companies had still reported material weaknesses in internal control over financial reporting[7]. Examples of those companies include Grupo Simec S.A.B de C.V., Lifeway Foods Inc., Digital Turbine Inc., and CytoDyn Inc(Fernandez, pg. 1).

Section 404 of the Sarbanes-Oxley Act requires company management through an annually filed SEC report to assess the effectiveness of a company's internal control over financial reporting. However, it is clear that some weakness remains in the law's requirements regarding internal control of financial reporting. This thesis asks: what explains Section 404's shortcomings and inability to effectively as well as efficiently govern firms' internal control over financial reporting?I find that this regulation is vague and ambiguous as it affords too much discretion to firms and that it relies on an inadequate approach to risk-based regulation.

This research study aims to study section 404 of the Sarbanes Oxley Act passed in 2002, as it is evident that even though this specific section of the Sarbanes Oxley Act was meant to improve internal company controls over financial reporting, there have still been instances from 2002 where both investors and regulators have felt that annually filed SEC[8] reports regarding management assessment on company internal controls over financial reporting have not been accurate or reliable enough. In addition, the Public Company Accounting Oversight Board[9] which passes auditing standards[10] for companies to follow along with the discretion and approval

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[7] The abbreviation for internal control over financial reporting is ICFR

[8] United States of America's Securities and Exchange Commission' abbreviation is the SEC.

[9] The Public Company Accounting Oversight Board's abbreviation is the PCAOB

[10] The PCAOB is "a nonprofit corporation established by Congress to oversee the audits of public companies in order to protect investors and further the public interest in the preparation of informative, accurate, and independent audit reports. The PCAOB also oversees the audits of brokers and dealers registered with the Securities and Exchange Commission (SEC), including compliance reports filed pursuant to federal securities laws"(PCAOB - https://pcaobus.org/about#:~:text=The%20SEC%20has%20oversight%20authority,rules%2C%20standards%2C%20and%20budget).

of the Securities and Exchange Commission[11], has also affected internal control over financial reporting to become inaccurate. More specifically, the auditing standards passed by the PCAOB have given firms the ability to furnish inaccurate financial reports and not be held accountable for it. In contrast with the intentions of section 404 of the Sarbanes Oxley Act, inaccurate financial reporting has persisted, such as the FTX Exchange Scandal[12], for the past twenty years. This is because securities regulation under Section 404 still allows inaccurate and unreliable reports to legally be furnished with no legal repercussions whatsoever.

This paper begins with literature review discussing studies of the Sarbanes-Oxley Act and its limitations, as well as more general explanations for policy failure. I use this literature review to generate three plausible explanations for regulatory failure in the context of the Sarbanes Oxley Act, and specify a series of observable implications for each. In order to assess these explanations, I used a research methodology called process tracing by triangulating three forms of data. The paper with a discussion of my findings and potential policy implications.

II. Literature Review

A. Review of section 404 and the need for improvements

[11] Approval of the PCAOB's auditing standards automatically come from the SEC as "the SEC has oversight authority over the PCAOB, including the approval of the Board's rules, standards, and budget"(PCAOB - https://pcaobus.org/about#:~:text=The%20SEC%20has%20oversight%20authority,rules%2C%20standards%2C%20and%20budget.).

[12] According to the SEC's complaint, "since at least May 2019, FTX, based in The Bahamas, raised more than $1.8 billion from equity investors, including approximately $1.1 billion from approximately 90 U.S.-based investors. In his representations to investors, Bankman-Fried promoted FTX as a safe, responsible crypto asset trading platform, specifically touting FTX's sophisticated, automated risk measures to protect customer assets. The complaint alleges that, in reality, Bankman-Fried orchestrated a years-long fraud to conceal from FTX's investors (1) the undisclosed diversion of FTX customers' funds to Alameda Research LLC, his privately-held crypto hedge fund; (2) the undisclosed special treatment afforded to Alameda on the FTX platform, including providing Alameda with a virtually unlimited "line of credit" funded by the platform's customers and exempting Alameda from certain key FTX risk mitigation measures; and (3) undisclosed risk stemming from FTX's exposure to Alameda's significant holdings of overvalued, illiquid assets such as FTX-affiliated tokens. The complaint further alleges that Bankman-Fried used commingled FTX customers' funds at Alameda to make undisclosed venture investments, lavish real estate purchases, and large political donations"(SEC Press Release #2022-219).

Most corporations have some form of public or governmentally mandated risk and compliance management[13] aimed at creating risk assessments to limit liability[14]. This includes liability under Section 404 of the Sarbanes Oxley Act. One of the requirements set forth by law and the United States Securities Exchange Commision is that an "issuer that has published audited financial statements prepared in accordance with internal control of financial reporting for each of the three latest financial years shall include all three years of audited IFRS financial statements in its SEC filings"(Securities and Exchange Commission and Office of Economic Analysis, pg. 17) . One of the most criticized and contentious aspects of the Sarbanes Oxley Act is Section 404 in which reporting on Internal Control over Financial Reporting adequacy is a requirement for management and external auditors (She-I-Chang, et. al., pg. 211). Companies note this as the most costly aspect of implementing Sarbanes-Oxley compliance. This is because testing and documenting important financial controls requires vast effort (Chan, Farrell, & Lee, pg. 3). Corporate management is required to deliberate both the evidence gathered concerning risks and the scope of its assessment as both management and external auditors have the responsibility for performing a top-down[15] risk based approach (Romney and Steinbart, pg. 583).

One of the other intentions of the Sarbanes Oxley Act was to detect white collar crime such as, securities fraud[16] committed by misleading investors, through making sure companies

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[13] Corporate Risk Management is complex as "while disclosure regarding risk management activities has become more prevalent in the past decade, such disclosures only tell part of the story about firm behavior and very little about the underlying preferences and incentives of the managers making risk management decisions" (Giambona et. al, pg. 783).

[14] Risk management is the practice of using "the design of procedures and the implementation of procedures to manage a business risk. Risk management is an anticipation of the increasingly complex activities of business entities or companies that are triggered by the development of science and technological progress (Kasidi, 2010). Another definition that explains the meaning of risk is the possibility of deviations from expectations that can cause harm. Risk is a possibility of an event that deviates from what is expected, but this deviation is only seen when it has taken the form of a loss (Kasidy, 2010)"(Susanto and Meiryani, pg. 103)

[15] See in Appendix A for what the SEC has both defined and instructed as a top-down risk based approach

[16] "The law of securities regulation does not stand on a single conception of fraud. "Securities fraud"is an umbrella term for several causes of action, some of which are forms of core fraud and some of which are for forms of misrepresentation"(Buell, pg. 541)

had the adequate necessary internal financial controls. However, section 404 gives companies much more liberty than expected by investors and the public with how to generate these reports. Corporate liberty relates to the feasibility and discretion that has been given to publicly traded corporations for reporting on financial factors, circumstances and characteristics other than what is required by the U.S. SEC. Examples of this include, but are not limited to whether firms report, USD debt and notes issuances as well as total derivative payables. It is also critical and important to note that white-collar crime "is endlessly complex, and has many complex dimensions. We have to recognize what we call white-collar crime can be configured in many different ways"(Potter , pg. 67).

Scholars and Commentators have argued that the Securities and Exchange Commission did not go far enough as to the requirements set forth by legal compliance under section 404. For example, Jerry Markham explains how the SEC has advocated for public companies to use reports on their accounting control systems, and that the SEC wanted the auditors of those companies to use their designed controls(Markham, pg. 175). These designed controls included a top down risk based approach. Markham also mentioned that management was required to keep an internal accounting control system that provided reasonable assurances for a company's asset accountability. This included limiting access only to authorized personnel requiring periodic verification. Yet, companies were confused as to what those standards meant, and those standards were somewhat vague. (Markham, pg. 175).

An example of how Section 404 still gives companies a copious amount of freedom is that the law "did not require auditor rotation, a long-advocated reform, but did require the lead audit partners to be rotated every five years. Junior Partners had to be rotated after seven years but could return after two years"(Markham, pg. 454). Basically, an example of a problem that section 404 still does not deal with, is that a rotated lead audit partner and review partner could come back after just five years. This is important because it could create issues for auditing firms with regards to conflict of interests. In addition, a conflict of interest can potentially impede an entity's duty to perform their obligations accurately and at least adequately. An example of this would be a conflict of interest getting in the way of an external auditing firm accurately accessing the internal controls of financial reporting company management has accessed.

In 2009 about seven years from when the law was passed, the United States Securities and Exchange Commision along with the Office of Economic Analysis conducted a study on Section 404 of the Sarbanes Oxley Act. This research study collected data from publicly traded companies through an SEC-sponsored web survey of financial executives on their experience with section 404 compliance. Part of the study's findings described that because the cost of complying with section 404, has been generally viewed as surprisingly and unintentionally high, a series of reforms in 2007 came from attempts to reduce cost while retaining the effectiveness of compliance (Securities and Exchange Commission, pg. 1). This relates to high costs that are seen as problematic with the current policy of section 404, that can have a chain effect on accurate reports with regards to internal control over financial reporting. One possible policy solution that some, such as the SEC themselves have mentioned, which could improve section 404; is to change who is in charge as a requirement under law, to conduct assessments through financial reports. This includes the main big four accounting firms that publicly traded companies retain to handle their auditing and a company's board of directors. The board of directors include the Chief Executive Officer(CEO) and the Chief Financial Officer (CFO). Instead of potentially having the private sector conduct these audits with respect to assessment of financial reports, it might be wise to have a public regulatory body perform those assessments. This proposed solution could possibly manage assessments on internal controls over financial reporting in a method in which certain financial information would not be withheld. More specifically, neither company management nor one of the four big auditing firms that they retain, would have the feasibility to withhold or not provide accurate financial information about the company for their own personal benefit.

In addition, most users asserted that the separate annual evaluations of the effectiveness of internal control on financial reporting by both management[17] and auditors increase their level of confidence in the quality and reliability of companies' financial reports for a number of reasons. According to a study conducted by the Securities and Exchange Commission and Office of Economic Analysis, there is a belief that Section 404 Compliance causes management to devote even more resources to have a disciplined financial reporting process. The users believe that Section 404 requirements cause control management to: 1) better comprehend or understand risks associated with financial reporting; 2) timely address or deal with internal control deficiencies; and 3) implement appropriate financial reporting risk controls. Even though some study participants believed that section 404 requirements enhanced company management's ability to identify and address fraud related risks, most participants recognized that the company's ability to prevent or detect fraud was not significantly improved by Section 404 requirements (United States Securities and Exchange Commission, pg. 88 and 89).

A major concern of section 404 is that though it is somewhat effective in the current moment, financial reports are not being created in a method that would make them sufficiently accurate and hence not substantially reliable either. More specifically, there are financial reports

[17] It is vital to take into account that "this financial reporting obligation is ultimately discharged by the company's senior management (e.g., its chief executive officer ('CEO'), its chief financial officer ('CFO'), and, to a lesser extent, its board of directors). Unfortunately, there is a significant risk that those managers will not provide accurate financial information when they discharge their duty"(Orcutt, pg. 336)

not being accurately created because of inaccurate financial data being disclosed or incomplete data being disclosed. John L. Orcutt, who is a law professor at the University of New Hampshire Franklin Pierce School of Law, has mentioned that since 2002 deliberate falsification of data by companies occurs on occasion and receives a lot of attention. Yet that is not the rule and instead is the exception. Company management's unintentional disclosure of incomplete and inaccurate financial information or data, leads to the rise of a more systematic source of inaccurate data. As the economic activities of companies grow ever more complex, a company's senior management does not necessarily have accurate financial information. If management puts into place robust systems that gather and assess information, company management will be able to give accurate financial disclosures when it eventually comes to it (Orcutt, pg. 337). This is crucial especially when a company's financial activities could be growing or expanding. Even though this is not explicitly written in section 404 as a requirement, the purpose of having a management's assessment on internal control over financial reporting was to deter fraud. If accurate information is not disclosed, financial fraud can occur. This is seen in the research study that was conducted by the Securities and Exchange Commission and the Office of Economic analysis. The SEC stated that regardless "of how each individual user uses Section 404 disclosures, there is a consensus that material weaknesses represent 'red flags' in that management either is not receiving the information needed to effectively manage and report on its business or is receiving information that is not sufficiently reliable" (Securities and Exchange Commission and Office of Economic Analysis, pg. 89). Moreover, there are some scholars, such as Bainbridge, who believe that section 404 of SOX was not at all a success, because "both adverse managerial reports and auditor attestations actually rose prior to 2014 and have dropped only slightly in the subsequent period. Problems with firms failing to remediate persistent material weaknesses remain a source of concern" (Bainbridge, pg. 1).

Weili Ge, Allison Koester, and Sarah McVay found section 404(b) compliance to be truly effective if a public accounting firm in charge of auditing a publicly traded company has auditor oversight. This study talked about how auditor oversight is critical[18] to seriously evaluate a firm's internal control effectiveness. The study by Ge, Koster and McVay shows that section 404(b) proponents believe only if auditors are involved do managers seriously evaluate and disclose the effectiveness of their firms' internal controls. Ge, Koster and McVay mention how the SEC has acknowledged the importance of auditor oversight, and that the SEC has also stated that there is strong evidence that the reliability of internal control disclosures and financial reporting overall are improved by the auditor auditing the company's effectiveness (Ge, et. al, pg. 361). The importance of auditor oversight is that evidence has been provided to show auditors detect 84 percent of ineffective internal controls and auditor intervention increases the disclosure of material weaknesses (Ge, et. al, pg. 361). This is important as ineffective controls are considered a "red flag"[19] by both buy-side[20] and sell-side[21] analysts. In addition, managers have an incentive to avoid reporting ineffective internal controls. Hence, the absence of auditor oversight may lead to internal control misreporting because auditor oversight may lead to internal control misreporting (Ge, et. al, pg. 361).If corporations do not accurately disclose data to the auditing firm that they retained, including certain financial information that could add up to would

[18] One theory suggests that "a link between public audit oversight and reporting credibility is that PCAOB inspections identify meaningful deficiencies in the way audits are conducted, leading to subsequent improvements in auditing procedures that extend beyond a single engagement. Investors learn about these broader changes and adjust their assessments of reporting credibility accordingly"(Gipper, pg. 2-3)

[19] See "red flag" in both Brown, et al., 2015 and Brown et al., 2016

[20] "Buy-Side – is the side of the financial market that buys and invests large portions of securities for the purpose of money or fund management"(Powell, pg. 1).

[21] "Sell-Side – is the other side of the financial market, which deals with the creation, promotion, and selling of traded securities to the public"(Powell, pg. 1).

constitute ineffective internal financial controls, then perhaps section 404 would be much better or could be improved by granting more power through auditor oversight.

Improvements in public policy[22] with regards to Section 404 can be made so long as the government or state is willing to do so[23]. Those improvements could include changes in public policy with regards to even more specific action being instructed to the appropriate federal agencies through the letter or specific text of a piece of legislation. This includes financial and securities regulation through internal controls over financial reporting. The federal agency in this specific case would be the United States Securities and Exchange Commission. The United States of America should update financial laws to keep up with a growing vast economy that would include creating an environment in which there are even stronger internal controls over financial reporting. It is imperative that there should be efforts to find a better public policy outcome that addresses the needs of updating Section 404. Nevertheless, auditing or creating financial reports under compliance with Section 404 can have a much better effect if the law is amended to make those financial reports much more accurate. “Other possible approaches for structuring business practices and the domestic economy of a state are excluded for failing to fit into a pattern that may be surveilled and audited in accordance with these global standards”(Vleck, pg. 641).

B. Explanations For Policy Failure

Accurately identifying the causes of policy failures is necessary to remedy them and to find an effective method to change Section 404 of the SOX to improve the accuracy and

[22] “The public policy approach seemed to offer a more democratic and public basis for judging business performance than could be had either by relying on a vaguely formulated notion of social responsibility or by relying on a vaguely formulated notion of social responsibility or by leaving corporate response in the hands of a managerial elite deciding the meaning of corporate social responsiveness”(Buchholz, pg. 43)

[23] It is imperative to understand that “the major institutional force operative in the public policy process is the government, primarily the federal government and to a lesser extent state and local government. Other institutions are, of course, also active in the public policy process”(Buchholz, pg. 85)

reliability of corporate accounting disclosures found in annually filed reports (Corporate 10-K Forms filed to the Securities and Exchange Commission). The following explanations and each explanation's respective observable implications[24] describe what could have potentially been the reason as to why the intended policy effects under Section 404 failed and what we would expect to see if each explanation was accurate:

Explanation #1(ambiguity of auditing standards):

One possible explanation for the failure of Section 404 is that there has been an over emphasis on compliance with a lack of explicit guidance under section 404 of the Sarbanes - Oxley Act and that this ambiguity has given corporations the legal ability to furnish inaccurate and unreliable reports.[25] As former lawyer for the SEC Jerry W. Markham mentioned, ICFR auditing "standards were somewhat vague and companies were confused by what they meant"(Markham, pg. 175). In addition to, improving the standards for SOX is necessary as Nadelle Grossman puts it, "Section 404, however, targeted principally at improving the quality of financial reporting"(Grossman, pg. 425). Seabrooke, Leaver, Stausholm, and Wigan mentions how "good quality audits are integral to the smooth operation of any modern economy. Firms can expect dire consequences if the perceived legitimacy and quality of reported financial numbers falters" (Seabrooke et. al, pg. 8). Seabrooke, Leaver, Stausholm, and Wigan all mention that the purpose of an audit is to ensure confidence within the market about a company. They state, "without

[24] For the purposes of trying to find as many academic and government sources to use for this research, artificial intelligence was used to help find those types of sources. ChatGPT was used to find a link to Perplexity AI. Perplexity AI assisted in finding links to academic and government sources that were used in this research. I then analyzed those sources and used them to create observable implications two and three meant for explanation two. Links to sources generated by Perplexity AI. Troy Taylor, December 12-13, 2023, https://www. perplexity.ai/. Link to Perplexity AI generated by ChatGPT. OpenAI, December 10, 2023, https://chat.openai.com/

[25] "Financial statements issued by companies covered by Sarbanes - Oxley 404 in 2010 at that time were running around 5 per cent or, stated another way, one in every 20 auditor-certified financial statements was later found to have material errors that required restatements under US GAAP. It is important to note that virtually all of the financial statements that had to be restated to correct material accounting errors contained CEO/CFO/External Auditor SOX certifications in the original filings that stated the internal accounting controls over financial reporting are 'effective' " (Leech and Leech, pg. 310).

robust audits, confidence in companies disappears - banks will not lend, shareholders will not invest, workers will not commit their labour, suppliers will not transact and consumers will not buy" (Seabrooke et. al, pg. 6). As Jacqueline Best, contends, "like risk and uncertainty, ambiguity poses genuine challenges and possibilities for the practice of governance" (Best, pg. 356). If true, this explanation would give rise to the following observable implications:

Observable Implication 1.1: If it is the case that the law is ambiguous and affords too much discretion to corporations we should expect to see loopholes being taken advantage of by corporations under section 404 as guidelines for internal auditing are being set forth by the Public Company Accounting Oversight Board[26]. We should expect to see a divergence between what is necessary and desirable for investors to know what gets reported, even though there are PCAOB Guidelines meant to make sure that public financial reports are accurate with regards to internal control over financial reporting. Corporations then use these vague standards as loopholes to decide on what associated financial data to report as the law does not require them to disclose some financial matters.

Observable Implication 1.2: The ambiguity or vagueness in the textual policy of section 404 creates significant latitude in what corporations can do, despite to regulations set forth by the PCOAB, when it comes to determining what constitutes a "material weakness"[27] in internal controls. It is up to the discretion of the auditing firm to decide certain parts of an annual management assessment ICFR report as to what is weak or strong without any objective

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[26] "The genesis of the SOX 404 legislation was drawn from conclusions of Commissions that studied the problem of unreliable accounting dating back to the late 1970s...The SOX 404 sections referenced above were initially implemented via the much maligned and criticized Auditing Standard No. 2 ('AS2') enacted by the PCAOB. The focus of AS2 reveals that it uses the word 'risk' 98 times compared with 1802 instances of the word 'control'... Auditing Standard No. 5 ('AS5'). The PCAOB was told by the SEC to come up with a more 'risk-based' approach"(Leech and Leech, pg. 309).

[27] The definition of "material weakness" is "is a deficiency, or a combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of the registrant's annual or interim financial statements will not be prevented or detected on a timely basis". See definition in 17 CFR § 240.12b-2

regulation.[28] This can be observed through the data if only some companies decide to report on certain financial matters, such as key performance indicators. Another example of this could be seen through whether the amount of USD Notes and Debt Issuances of a corporation gets reported.

Observable Implication 1.3: Potentially inaccurate reports can be created based on the result of a lack of guidance through the wording of the law under section 404 with regards to obtaining external auditor independence. Currently, it is not illegal under section 404 for an auditing firm, such as KMPG, to provide consulting services to the same companies they audit. This means that not only could there be a conflict of interest, but that an inaccurate financial report can be created on behalf of the profit or benefit of a corporation.[29]

Observable Implication 1.4: If the same company that is the auditor of a financial institution, is also the auditor of a limited liability company registered in Delaware that receives loans or lines secured credit from that financial institution, there can be a conflict of interest created. The ambiguity of and lack of guidance is what can lead to that conflict of interest[30]. With this, it can be observed through the data if a corporation decides what to disclose about consolidated transactions.[31]

Explanation #2(regulations are insufficiently risk-based):

[28] When it comes to useful and meaningful risk assessment, "a direct relationship exists between the degree of risk that a material weakness could exist in a particular area of the company's internal control over financial reporting and the amount of audit attention that should be devoted to that area. In addition, the risk that a company's internal control over financial reporting will fail to prevent or detect misstatement caused by fraud usually is higher than the risk of failure to prevent or detect error" (Leech and Leech, pg. 309)

[29] Jeffery Markham highlights how vital it is to at least recall the notion that the SEC,"has long promoted the use of reports by public companies on their systems of accounting controls, and the agency wanted auditors to test those controls. The Foreign Corrupt Practices Act did not go that far but imposed a requirement that business transactions at public companies must be executed in accordance with management's authorization and in a manner that permits the preparation of financial statements in conformity with GAAP"(Markham, pg. 175).

[30] "Simply put, a true-centric approach to SOX 404 would use a 'risk-based targeting' approach to allocate assurance resources, and would manifest attributes of an 'enhanced risk management' framework,"(Leech and Leech, pg. 311)

[31] "Given the regulatory focus on the importance of effective risk management, if SOX 404 is left unchanged as a representation on 'control effectiveness', it will be increasingly be out of sync with the broadly accepted belief that more effective risk management is what is really needed going forward" (Leech and Leech, pg. 311).

A second possible explanation is for the failure of Section 404 is that, although the law gave the Securities and Exchange Commission along with the Public Company Accounting Oversight Board, the authority to require risk-based reports on the effectiveness of a company's internal control over financial reporting, it did not actually end up being risk[32] based according to risk management professionals and standards. As Leech critically notes, "Registrants are currently forced by the SEC rules to use COSO Internal Control Integrated Framework, a 'control framework', not a risk framework, as the primary assessment criteria to complete the assessment;" (Leech and Leech, pg. 313).. If this explanation is correct we should expect to see the following observable implications:

Observable Implication 2.1: If it is the case that section 404's regulations on management's assessment of internal financial controls are not actually risk based, then we should see more of an emphasis on documentation of financial records rather than how those same submitted financial records or documents were analyzed[33]. The analysis of the documents would generate a much more "hands on"[34] and "solution appliance"[35] approach to not only measuring a corporation's financial risk factors but also trying to remedy it before another financial ICFR report is due.[36]

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[32] Seabroke and Wigan are also critical of how innovation has to reallocate or reduce risk (Seabroke and Wigan, pg. 5)

[33] "The vast majority of SOX 404 assessments today are done with no attempt to utilize statistical information on the most likely areas where material accounting errors and irregularities occur;" (Leech and Leech, pg. 313).

[34] "Hands on" approach would be best defined as "someone with a hands- on way of doing things becomes closely involved in managing and organizing things"(Cambridge Dictionary). Relative to the purposes of this research "hands on" approach could also be best considered as directly involved with the understanding or analysis of documents rather than an emphasis of how much documentation.

[35] "Solution appliance" approach would be best defined as "having an action or process of solving a problem as well as using it"(Merriam-Webster Dictionary) For the purposes of this research, "solution appliance" can be best considered actually using or applying the solution to fix the problem of inaccurate reports being generated with regards to internal control over financial reporting.

[36] "For the definition of risk based targeting above to be true for the objective of producing reliable financial reporting with the SEC defined tolerance of zero material errors, companies would need to determine themselves, or be told by the SEC, or a source recognized by the SEC as legitimate, what areas of their financial disclosures, and the financial statements of others in their business sector, have historically shown the highest statistical probability of being materially misstated and why"(Leech and Leech, pg. 313).

Observable Implication 2.2: If it is the case that section 404 regulations are not based on being risk based, we should expect to see business growth being reported as an indicator of business health[37]. However just because there is business growth it does not automatically mean that a corporation has financial health. Vice versa, if a corporation is considered to have financial health, it does not mean that they have growth[38] in their business. One can expect to see this in the data through whether factors such as expected growth areas, percentage changes on operating income and revenues, as well as liquidity and capital resources, were reported.

Observable Implication 2.3: If Section 404 compliance and regulations are not actually risk based, there should be a clear gap between internal control over financial reporting accuracy and company financial creditor insolvency, without substantial or meaningful form of indication.[39] There is not a substantial or meaningful form of indication as only total debt is treated for measuring and controlling company creditor insolvency. This observable implication can be noticed if factors such as total derivative payables, debt to revenue and debt to equity ratios, steps were taken for fraud and misstatement detection, as well as foreign[40] versus domestic debt and assets, were reported.

Observable Implication 2.4: If this explanation is correct, one would expect to see that, Section

[37] "The vast majority of SOX 404 assessments do not direct assurance resources to assessment and testing areas proportionate with their statistically probable and highest impact risks;"(Leech and Leech, pg. 313)

[38] public companies—the Fortune 1000—saw their choice of auditor as limited to three or fewer firms, and about 60 percent viewed competition in their audit markets as insufficient" (United States Government Accountability Office - Report #GAO-08-163, pg. 2)

[39] "The current SEC and PCAOB standards provide virtually no guidance on how to actually identify risks that threaten the reliability of the financial statements as a whole, or specific account balances and note disclosures, and how to identify and analyze the likely effectiveness of the 'risk treatments' in place to mitigate those risks"(Leech and Leech 313).

[40] "Opportunities for asset management and liability reduction strongly informed the internationalization of corporate structures"(Bair et, al., pg. 2424)

404[41] has not been updated to keep up with new technology[42]. This includes but is not limited to artificial intelligence[43].

Explanation #3(Compliance Costs):

A third potential explanation for section 404's inadequate risk management is that the current high cost of complying[44] with section 404 of the Sarbanes Oxley act, has led to corporations to weaken their accuracy and reliability with internal control over financial reporting.[45] As Orcutt writes, "there is no consensus on the cost-effectiveness of Section 404. Critics of the statute decry that Section 404 'has gone too far' and point to: (1) the substantial compliance costs, reasoning that it is unrealistic to expect that Section 404 generates sufficient benefits to offset those costs; and (2) anecdotal evidence that suggests smaller reporting companies are employing strategies to avoid being subject to Section 404"(Orcutt pg. 330):

Observable Implication 3.1: With the high cost of complying with section 404 of the Sarbanes Oxley Act, it might be cheaper to simply not comply and end up paying the fine amount that the

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[41] The definition of a "risk based environment" for internal control over financial reporting would be the "auditor should should obtain an understanding of control activities that is sufficient to assess the factors that affect the risks of material misstatement and to design further audit procedures"(PCAOB AS 2110, paragraph 34).

[42] "The amount of disclosure companies and auditors must make when material errors in prior period disclosures are discovered is highly variable and generally limited"(Leech and Leech, pg. 313).

[43] "For many years, internal controls have been the focus of auditors' risk assessment as they seek to attest that the control environment is working effectively to minimize the potential for fraud. As standards have evolved to focus more on fraud, so has technology. Innovations such as artificial intelligence (AI), robotic process automation (RPA), and blockchain have been touted as tools that will assist in identifying fraud;" (Nickerson, pg. 1)

[44] "Moreover, the costs of Section 404 extend beyond merely audit fees: Section 404 creates monitoring and opportunity costs throughout the corporate structure. Section 404 compliance redirects management from its primary task of generating earnings to the secondary task of overseeing a large accounting endeavor. Both directors and shareholders must spend more time ensuring that management is complying…Some estimate compliance costs smaller public companies 25 times more than it costs the largest public companies, when compliance costs are measured as a percentage of revenue" (Arnold, pg. 934-935).

[45] "Conversely, proponents for Section 404 tend to focus on the beneficial impact that Section 404 should have on investor protection and on an issuer's cost of capital by improving financial disclosure accuracy" (Orcutt, pg. 330).

SEC gives.[46]Thus, one can expect to see a corporation potentially not state or report whether Non-GAAP standards such as IFAS were used or followed and whether or not if the auditing firm's basis for opinion is in accordance with the standards of the PCAOB.

Observable Implication 3.2: Since there is a high cost of complying with Section 404, smaller companies with limited resources may be expected to fare more poorly in maintaining quality effective internal controls than do larger Fortune 100 companies with the available resources to do so[47]. One can expect to observe this if a corporation does not disclose management's view of potential risks and their mitigation strategies.

Observable Implication 3.3: The high cost of complying with section 404 may lead to companies being incentivized to not take any risks with new ideas, concepts, devices, or innovations that could affect the company's finances. This includes financial aspects that would actually make a company's internal controls much more stronger, such as obtaining a much larger amount in revenue that could then lead auditors to access a better debt to equity and debt to revenue ratio.[48]

Observable Implication 3.4: The high costs of complying with Section 404 of the Sarbanes Oxley act may have led to corporations legally limiting how much foreign assets and foreign liabilities they have, especially those held in countries with which the United States does not have an extradition treaty, when creating annually filed reports to the Securities and Exchange Commission. Especially foreign assets and debts in countries in which the United States does not

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[46] "If managers of smaller reporting companies act to maximize shareholder value, one should expect them to: (1) voluntarily choose to comply with Section 404 if it proves to be cost-effective, since it would have a net positive impact on shareholder value, or (2) avoid Section 404 if it is cost-ineffective, since it would have a net negative impact"(Orcutt, pg. 403).

[47] "For companies that choose not to comply, investors will still face information deficiencies and will need to expend resources to obtain and analyze this information"(Arnold, pg. 950).

[48] "Section 404 disproportionately burdens smaller public companies…When compliance costs are measured as a percentage of revenue. As a result, smaller companies may be driven out of the public markets by the costs of complying with Section 404. Emerging smaller private companies increasingly forgo a public offering, choosing instead to be sold privately or to list on foreign exchanges with less regulatory burden. Smaller companies that are already public may choose to 'go private' and enjoy regulatory cost savings, or to 'go dark' and move to less regulated over-the-counter exchanges" (Arnold, pg. 935- 936)

have a recognized extradition treaty. This can be observed if a corporation does not disclose foreign or domestic assets and debt.

III. Methods

This project used process tracing to test each of the three explanations against each other and again the data described above. Process tracing is an analytical tool often understood as a part of temporal sequence of events when drawing descriptive and causal inference from a diagnostic piece of evidence. Process tracing can make pivotal contributions to diverse research objectives given the close engagement and centrality of knowledge. This can include: (1) recognizing key political and social phenomena while systematically expressing them; (2) assessing prior hypotheses and discovering new hypotheses as well as assessing new causal claims; (3) obtaining insight into causal mechanisms; and (4) providing different means. Those means are meant to deal with challenging problems such as fallacies, reciprocal causation, and selection bias, Hence, leverage can be obtained through qualitative tools in quantitative analysis (Collier, pg. 824).

Specifically, process tracing focuses "on the systematic study of the link between an outcome of interest and an explanation based on the rigorous assessing and weighting of evidence for and against causal inference. By defining process-tracing in these terms, we emphasize the role of theory and the empirical testing of hypotheses." (Ricks and Liu, pg. 843). Ricks and Liu note that to craft research design based on process tracing, it is imperative that researchers must define all their theoretical expectations, give direction to their research, and identify the types of data necessary for theory testing. Testable hypotheses established based on theories is the first step for quality process tracing. There is one important difference with process tracing in which not only the theory of interest becomes a concern but rather that of rival explanations must be juxtaposed. It is vital that the hypothesis is assessed against other potential alternatives (Ricks and Liu, pg. 843).

The second step is to sequence events in the order that would be appropriate for the research being conducted at hand and create a foundational timeline. In other words "timelines should be bookended according to the theoretical expectations. The conclusion of the timeline will be at or shortly after the outcome of interest—that is, the dependent variable. The challenge is to identify how far back in time we must go to seek out our cause."(Ricks and Liu, pg. 843) After a timeline has been created and followed it is very much possible to conduct qualitative policy analysis research on a quantitative scale. Though qualitative research is being conducted with a two step policy analysis[49], it is possible to "pinpoint the hypothesized explanation and the outcome in a temporal chain. We can specify where and which types of empirical information are necessary for the analysis. The timeline and the causal graph can be developed together iteratively. Whereas the sequence of events will not change, the creation of the causal graph might cause us to revisit the timeline to clarify links or highlight important missing information"(Ricks and Liu, pg. 844)

IV. Data

This research study used process tracing to test possible explanations for the inadequacies of Section 404 of the Sarbanes Oxley Act which potentially allow inaccurate and unreliable financial reports to be legally generated, focusing on reports that relate a company's management assessment of internal controls on financial reporting. Process tracing was conducted by triangulating three forms of data, which were investor surveys, corporate 10-K forms, and SEC as well as PCAOB press releases containing auditing instructions and requirements.

[49] The two step policy analysis refers to first determining through various explanations what went wrong with a piece of legislation and then a potential solution on how to fix a problem with a current policy.

Section 404 of the Sarbanes-Oxley Act requires corporate company management through an annually filed SEC report to assess the effectiveness of a company's internal control over financial reporting. These reports are referred to as 10-K filings and typically include both information about the financial condition and audited financial statements of a publicly traded company[50]. These reports are required[51] of all companies that list their securities on a U.S. Exchange which totals about 940 company reports annually. Of the 10-K form filings for the fiscal year ended in 2022 and made available in 2023, I randomly selected a list of 30 to analyze, according to the following approach: the SEC has a list of publicly traded companies in which I used to obtain a sample of 30 corporations. The list of all corporations was taken and each of the corporations were assigned a number. A random number generator was used to find 30 random numbers. The number range was from 1 to 940 because there were a total of 940 corporations. Whichever corporation whose number was chosen, would be included in the random sample of thirty corporate 10-K forms to analyze. The goal with this was to obtain a representative sample. The thirty corporations that were chosen were: 1) 3M Company, 2) AFLAC Incorporated, 3) Agilent Technologies Inc., 4) Amgen Inc, 5) Warner Brothers Discovery, 6) Apple Computer Inc., 7) ARAMARK Corporation, 8) AT&T Corp., 9) Berkshire Hathaway Inc., 10) The Boeing Company, 11) Citigroup Inc., 12) CVS Corp., 13) Deere & Company, 14) General Motors Corporation, 15) H.B. Fuller Company, 16) Hilton Hotels Corp., 17) Home Depot Inc., 18) J.P. Morgan Chase & Co., 19) Kellogg Company, 20) Marathon Oil Corporation, 21) Northrop

[50] "The annual report on Form 10-K provides a comprehensive overview of the company's business and financial condition and includes audited financial statements"(U.S. SEC website).

[51] It is known that every "company will be required to file a registration statement under Section 12 of the Exchange Act registering the pertinent class of securities if:

- it has more than $10 million in total assets and a class of equity securities, like common stock, that is held of record by either (1) 2,000 or more persons or (2) 500 or more persons who are not accredited investors; or
- it lists the securities on a U.S. exchange"(U.S. SEC Website)

Grumman Corporation, 22) Pacific Gas & Electric Corp., 23) Texas Instruments Inc., 24) Tyson Foods Inc., 25) UnitedHealth Group Inc., 26) Wal-Mart Stores Inc., 27) Walt Disney Co., 28) Wells Fargo & Company, 29) Wyndham International Inc, and 30) Zions Bancorporation.

Market capitalization[52] and the industry[53] that the corporation is part of was also researched, so that the representative sample could show variety. The market capitalization as of May 17, 2024 and industry of each company in my sample can be seen in Table 1.

Table1: market capitalization and industry data for each company

#	Company	Market Capitalization (billions of USD)	Industry
1	3M Company	58.247	Manufacturing
2	AFLAC Incorporated	50.214	Insurance
3	Agilent Technologies	45.198	Diagnostics and Research
4	Amgen Inc	167.62	Pharmaceuticals
5	Apple Computer Incorporated	2.911	Technology
6	ARAMARK Corporation	8.76	Food, Facilities, and Uniforms
7	AT&T Corporation	124.761	Telecommunications
8	Berkshire Hathaway Inc.	900.16	Insurance, Transportation, and Utility Business
9	Boeing Company	113.538	Aerospace
10	Citigroup Incorporated	122.21	Banking
11	CVS Corporation	72.41	Managed Healthcare
12	Deere and Company Inc	110.51	Construction Equipment Manufacturing
13	General Motors Corporation	52.21	Automotive Manufacturing

[52] The definition of market capitalization is “the value of a corporation determined by multiplying the current public market price of one share of the corporation by the total number of outstanding shares’(U.S. SEC Glossary, pg. 1).
[53] The definition of industry is “a group of productive enterprises or organizations that produce or supply goods, services, or sources of income”(Britannica, pg. 1).

14	H.B. Fuller Company	4.422	Adhesive Manufacturing
15	Hilton Hotels Corporation	51.057	Hospitality
16	Home Depot, Inc	341.123	Home Improvement Retail
17	J.P. Morgan Chase	588.089	Banking
18	Kellogg Company	1.799	Food
19	Marathon Oil Corporation	14.783	Oil & Gas
20	Northrop Grumman Corporation	69.658	Aerospace and Defense
21	Pacific Gas and Electric Corporation	48.637	Energy
22	Texas Instruments Incorporated	177.562	Semiconductor Manufacturing
23	Tyson Foods Incorporated	21.451	Food
24	UnitedHealth Group Incorporated	482.862	Health Insurance
25	Walmart Incorporated	521.065	Retail
26	Walt Disney Company	188.229	Entertainment
27	Wells Fargo and Company	212.944	Banking
28	Warner Brothers Discovery	19.749	Entertainment
29	Wyndham International Incorporated	5.72	Hospitality
30	Zions Bancorporation	6.639	Banking

Second, in order to identify how well these reports meet the needs of a key constituency for section 404's disclosure requirements, I examine surveys of investors in publicly traded companies. The investor surveys were found from PwC, KMPG, and Deloitte's websites. Finally, I looked at auditor instructions from the SEC and PCAOB. These instructions cover requirements such as top-down risk based approaches, operation of controls through assessments of risk, control environment, controls over management override, policies for significant business control, and adequate risk management. These are important to analyze because they show the regulation's conception of what constitutes risk and the regulatory intent of having management assess internal controls over financial reporting. The SEC and PCAOB press releases were found on the SEC and PCAOB websites. The SEC and PCAOB press releases had auditing requirements and instructions for publicly traded companies. Factors and characteristics that related to the observable implications for each of the thirty corporations were organized into a google sheet. The factors and characteristics were pulled from the SEC and PCAOB press releases and from the investor surveys. All thirty corporate 10-K forms were analyzed to see whether or not those factors and characteristics were reported.

V. Analysis and Discussion

My analysis of the data found that the first and second explanations - related to the ambiguity of the reporting standards and the inadequacies of the mandated approach to risk management - have more weight, merit, and credibility than the third explanation in explaining what went wrong with the policy under Section 404. Table 2, provides an overview of whether or not the research results can serve as evidence for the explanations and observable implications[54].

Table 2: Summary of evidence for and against explanations for regulatory failure

Explanations and Observable Implications	Evidence - Yes	Evidence - No
Explanation #1(ambiguity of auditing standards)	X	
Observable Implication 1.1 (loopholes being taken advantage of)	X	
Observable Implication 1.2 (discretion of auditing firm to decide what's disclosed)	X	

[54] The explanations and observable implications have a shorthand name so that it will be easier to reference them throughout this analysis section.

Observable Implication 1.3(external auditor independence and conflicts of interest)		X
Observable Implication 1.4(conflicts of interest through lines of credit)		X
Explanation #2(regulations are insufficiently risk based)	X	
Observable Implication 2.1(more emphasis on financial record documentation than analysis)	X	
Observable Implication 2.2(business growth treated as evidence for risk profile)	X	
Observable Implication 2.3(ICFR and financial creditor solvency gap)	X	
Observable Implication 2.4(neglect of new technology in risk assessment)		X
Explanation #3(compliance costs)		X
Observable Implication 3.1(cheaper to not comply and get fined)		X
Observable Implication 3.2(smaller companies have poor internal controls)		X
Observable Implication 3.3(firms are incentivized not to take risk)		X
Observable Implication 4.4(firms limit foreign asset and debt disclosure)		X

I found substantial evidence consistent with the first proposed explanation: an over emphasis on compliance with a lack of guidance under Section 404 of the Sarbanes - Oxley Act. Ambiguity with standards has given corporations the legal ability to furnish inaccurate and unreliable reports. The ambiguity of standards relates to the liberty that the Securities and Exchange Commission has given with regards to how corporations can choose what financial information to disclose. This is very much noticeable even with a top-down risk-based approach. Firms independently deciding what they wanted to disclose were seen in what factors or categories were mentioned and not mentioned in the 10-K forms of the thirty publicly traded companies that were analyzed. For example, of the companies that mentioned expected growth areas, six out of thirty corporations did not report this and when it came to total derivative payables nineteen out of 30 did not report on this factor. Only four corporations reported a percentage change on operating revenues and twelve reported a change in operating income. This is consistent with observable implication 1.1 in which there are loopholes being taken advantage of by corporations with the current textual policy under section 404 as their guidelines for a specific part of government risk and compliance management, which that internal auditing is being set forth by the PCAOB.

Observable implication 1.2 is that firms have considerable latitude and discretion on what they decide to disclose. Beyond the regulations set forth by the PCAOB, when it comes to determining what constitutes a "material weakness" in internal controls, it is up to the discretion of the auditing firm to decide, based on certain parts of an annual management assessment ICFR report, what is weak or strong without any objective regulation.[55] An example of this discretion and its consequences for investors has to do with certain key performance indicators not being covered or not being disclosed at all. I found evidence to show what public investors would like to have information about when understanding the financial health of a company and its risk. The "PwC-Investors-Survey-Powerful-Stories-Through-Integrated-Reporting" survey stated 56% of investors and 31% of investors agree on how they would like to know about a publicly traded company's key performance indicator. Key performance indicators are financial circumstances reflected upon how a company has been doing and will be poised to do in the future. This includes categories such as debt to equity ratios, debt to revenue ratios, amount of foreign and domestic debt, amount of foreign and domestic assets, total assets, total debt, percentage changes on operating revenue, and percentage changes on operating income. The liberty given by the SEC through approving standards set forth by the PCAOB, means that companies are able to

[55] By hiring a specific auditing firm to handle section 404 compliance and reporting, that corporation approves of what is stated in that specific yearly 10-K form. This is seen through auditor attestation reports in 10-K forms.

disclose any details they desire under notes or instructions in the management's assessment of internal control over the financial reporting section of a company's filed 10-K form. This indicates that there are barely any objective means of measuring accurate risks and substantially meaningful methods to assess how to control risk with financial reporting. A section of internal control over financial reporting includes how management based their opinion upon the financial matters disclosed in the 10-K forms through risk factors and different financial information collected through accounting such as that with consolidated balance sheets, revenue sheets, and other accounting sheets as well.

The Securities and Exchange Commission has allowed companies to develop their own assessment procedures internally for control over financial reporting other than what is required by the SEC for a top-down risk-based approach. This gives firms the option to develop internal procedures but the concern lies with how corporations are also allowed to use their own informed judgment. Only four corporations reported the number of foreign assets, only four reported the amount of foreign debt, and one corporation reported the number of domestic assets and domestic debt. While there is not enough evidence through the research conducted to confirm observable implication 1.3 focusing on matters of a conflict of interest between the auditing firm and the publicly traded company, there is some evidence that supports the idea with liberty being given on disclosing information about financial notes. While a majority of corporations did so, eight out of the thirty corporations did not include the amount of USD Notes and Debt Issuances. This is vital as 73% of "PwC-Investors-Survey-Powerful-Stories-Through-Integrated-Reporting" survey correspondents said that it is important to "know how the business is positioned in its wider value chain" and 78% of "PwC-Global-Investor-Survey-2022" respondents said that they wanted to see "regulatory risk management". The data does not support observable implication 1.4 which is the existence of conflicts of interest through financial institutions being audited by those who obtain a line of credit from them. Even though a conflict of interest could be observed if the same company that is the auditor of a financial institution, is also the auditor of a limited liability company registered in Delaware that receives loans or lines secured credit from that financial institution, the data cannot confirm this notion.

The second explanation for the failure of the policy under Section 404 is well supported by my data. I find that the SEC's required approach to internal control over financial reporting regulation is not actually risk based. Internal control over financial reporting was intended to measure risk accurately, yet risk was not measured accurately and not actually dealt with properly. There is evidence to support observable implication 2.1 since I found that there was more of an emphasis on documentation of financial records rather than how those same submitted financial records or documents were subsequently analyzed. If they are adequately risk-based, in contrast, then the analysis of the documents would generate a much more "hands on" and "solution appliance" approach to not only measuring a corporation's financial risk factors but also trying to remedy it before another financial ICFR report is due. An emphasis on documentation rather than analysis was seen in the data because twenty-nine corporations stated liquidity and capital resources, twenty-nine included auditor attestation reports, twenty-nine mentioned the basis of their opinion was in accordance with the standards of the PCAOB, and thirty mentioned management's view of potential risks and their mitigation strategies. However, when it came to other factors part of the risk management framework, only seventeen out of thirty stated whether or not Non- GAAP Standards such as IFAS were used or not. In addition, only twenty four mentioned expected growth areas and only eleven stated total derivative payables. This is important because it shows that there has been more of a focus on trying to obtain as much documentation to obtain policy compliance, yet no meaningful or substantial analysis about the company, the financial risks they have with regards to security and prevention of fraud being committed, and the overall business health of a company.

If an international corporation that is a publicly traded company deals with financial transactions overseas through mergers, divestitures, acquisitions, and other types of financial transactions; there is a long process of accounting practices. Those standards would be incrementally shown within that other country's own accounting principles, then translated into another form such as through international financial accounting standards, and that could then be reflected into important financial information that is recorded into a 10-K form. Overall, these financial transactions should show up in both jurisdictions' accounting practices and disclosures, but based on money conversions the amount could be different and a different amount could get reported. This would include consolidated financial statements such as statements of income, balance sheets, stockholders' equity statements, statements of cash flows, and minor statements about derivative instruments. Within that international framework, there is a reasonable concern about the possibility of both fraud and financial misstatements. That can occur especially if factors such as the difference between foreign or domestic assets and liabilities are not reported in a 10-K form. Financial misstatements can not only misinform the United States Federal Government but also fail to provide a top-down risk-based approach.

Observable implication 2.2 is that business growth conflated with business health. Just because there is business growth it does not automatically mean that a corporation has financial health. Conversely, if a corporation is considered to have financial health, it does not mean that they have growth in their business. This is because the subjective reporting does not only come from the company, but the firm that got hired to perform the auditing. It is critical to note that twenty nine corporations included an auditor attestation report. Though there has been some guidance, there is still too much ambiguity given in the guidance of not only the text of Section 404, but rather through standards set forth by the PCAOB and approved by the SEC as well with regards to basis for opinions and auditor independence. With auditor independence there can be the possibility for inaccurate reports to be generated, in which there is the strong possibility that a public investor can suffer a great number of financial damages. In addition to public investors suffering damages, a minor problem in financial fraud prevention or control can grow to be incredibly enormous to the point where there is corporate collapse and also have a chain effect within a specific industry in an economy. This was observed in the data because although twenty-nine out of thirty corporations reported liquidity and capital resources and twenty four out of thirty mentioned expected growth areas; only twelve out of thirty reported a percentage change on operating income and four out of thirty reported a percentage change on operating revenues.

Moreover as stated in observable implication 2.3, there is a gap created between internal control over financial reporting accuracy and company financial creditor insolvency, without a substantial or meaningful form of indication. This is vital because all the thirty companies disclosed total liabilities and total assets, however most of them did not distinguish between total foreign and total domestic. There wasn't really any evidence to support observable implication 2.#4 because of the issue of the section 404's text not being updated to accommodate or keep up with new enhancements of technology such as quantum computing, 5G networks, and machine learning artificial intelligence. This is since unless the publicly traded company is a technological focused or a major company within the technology industry with an annual public float of more than 250 million dollars, any changes in auditor standards to have a specialized auditing standard for a technology company would be unnecessary. Auditing standards regardless of what they are should be consistent throughout companies of any industry. While the data does not directly count against observable implication 2.4, there is not much evidence or research results that would even come close to supporting it.

I find insufficient evidence to confirm or reject the third explanation, related to the costs of compliance impeding accurate reporting of firm's internal controls. Observable implication 3.1 states that because of the high cost of complying with section 404 of the Sarbanes Oxley Act, it might be cheaper to simply to not comply and end up paying the fine amount the SEC gives. However, because all but one corporation in the researched dataset mentioned their basis for opinion was set in accordance with the standards of the PCAOB, this observable implication cannot necessarily be directly proven to be true. While this research attempted to test observable implication 3.2, that states high costs can lead to smaller companies having poor internal controls, this research methodology really did not fit into the goals of this category nor are there any results to properly either support or refute this observable implication. Observable implication 3.3 states that the high cost of complying with section 404 can lead to companies being incentivized to not take any risks with new ideas, concepts, devices, or innovations that could affect the company's finances. While this is a possibility, this can not automatically be proven true because there is the fact that twenty four corporations mentioned expected growth areas. The same is true of observable implication 3.4 that states high costs of complying with Section 404 have led to corporations legally limiting how much foreign assets and liabilities they have. Although it is true that most corporations in the set of thirty that were analyzed did not report total foreign assets and liabilities as well as domestic assets and liabilities, correlation does not mean causation. The reason that corporations and their auditing firms decided to report it could be because of other reasons aside from high costs. The data and research evidence point the scale to show that the first two explanations have the best possible answer as to why the policy under section 404 failed and went wrong.

VI. Conclusion

Section 404 of the Sarbanes-Oxley Act requires any publicly traded company's management to assess the effectiveness of a company's internal control over financial reporting. In contrast to the intentions of Section 404, there have been a good amount of financial costs and consequences given to both regulators and public investors for the past twenty years. The purpose of this research study was to find out what could explain Sections 404's shortcomings and inability to effectively as well as efficiently govern firms' internal controls over financial reporting. This policy research study used process tracing through three explanations and observable implications. Three forms of data were triangulated, which were investor surveys, SEC and PCAOB press releases, and thirty corporate 10-K forms. My analysis of the data found that the first and second explanations - related to the ambiguity of the reporting standards and the inadequacies of the mandated approach to risk management - have more weight, merit, and credibility than the third explanation in explaining the shortcomings with the policy under Section 404. Both the ambiguity of auditing standards and regulations not being risk based can be proved but there is insufficient evidence to support the third explanation of compliance costs. Despite corporate and industry complaints, my analysis could not find much or substantial evidence to warrant and support the third explanation that the regulation of section 404 is too costly to comply with.

Based on this analysis, I believe that the best remedy for improving section 404 of the Sarbanes oxley act would be to change the law. I recommend making it a requirement under an added new clause of Section 404 to require company management to report on key performance indicators. More specifically, on total derivative payables, percentage changes on operating incomes and revenues, expected growth areas, how the company generates cash, debt issuances, and note issuances. In addition, when it comes to both assets and liabilities, it should be required under Section 404 of SOX by corporations to give information about their foreign and domestic assets or liabilities. This method would not only address the shortcomings of section 404 on the ambiguity of standards but actually make management’s assessment on internal control over financial reporting, risk based. If it becomes risk based, then it will make management's assessment even more accurate.

Appendices

Appendix A

Description of what was instructed and requested by the United States Securities and Exchange Commission:

- It was instructed and mentioned by the United States Securities and Exchange Commission that “the guidance describes a top-down, risk-based approach to this principle, including the role of entity-level controls in assessing financial reporting risks and the adequacy of controls…The second principle is that management’s evaluation of evidence about the operation of its controls should be based on its assessment of risk. The guidance provides an approach for making risk-based judgments about the evidence needed for the evaluation…Management should identify those risks of misstatement that could, individually or in combination with others, result in a material misstatement of the financial statements (“financial reporting risks”). Ordinarily, the identification of financial reporting risks begins with evaluating how the requirements of GAAP apply to the company’s business, operations and transactions…Management may identify preventive controls, detective controls, or a combination of both, as adequately addressing financial reporting risks”(SEC Press Release #33-8810 - June 27, 2007, pg. 16-17)
- The SEC directed corporations to understand that “There might be more than one control that addresses the financial reporting risks for a financial reporting element; conversely, one control might address the risks of more than one financial reporting element. It is not necessary to identify all controls that may exist or identify redundant controls, unless redundancy itself is required to address the financial reporting risks. To illustrate, management may determine that the risk of a misstatement in interest expense, which could result in a material misstatement of the financial statements, is adequately addressed by a control within the company’s period-end financial reporting process (that is, an entity-level control). In such a case, management may not need to identify, for purposes of the ICFR evaluation, any additional controls related to the risk of misstatement in interest expense. Management may also consider the efficiency with which evidence of the operation of a control can be evaluated when identifying the controls that adequately address the financial reporting risks.This would ordinarily include, for example, considering how and whether controls related to the control environment, controls over management override, the entity-level risk assessment process and monitoring activities,controls over the period-end financial reporting process and the policies that address significant business control and risk management practices are adequate for purposes of an effective system of internal control. The control frameworks and related guidance may be useful tools for evaluating the adequacy of these elements of ICFR”(SEC Press Release #33-9142 - July 11, 2006, pg. 6-7)
- As recognized by the SEC, "to date, many public companies have developed their own assessment procedures internally...When the Commission first adopted the internal

control over financial reporting requirements, we emphasized two broad principles: (1) that the scope and process of the assessment must be based on procedures sufficient both to evaluate its design and to test its operating effectiveness; and (2) that the assessment, including testing, must be supported by reasonable evidential matter. We stated it was important for each company to use its informed judgment about its own operations, risks, and process in documenting and evaluating its controls. We continue to believe that management must bring its own experience and informed judgment to bear in designating an assessment process that meets the needs of its company and that provides reasonable assurance as to whether the company's internal control over financial reporting is effective"(SEC Press Release #34-54122 - July 11, 2006, pg. 6-7)

- The SEC noted "we estimate that approximately 966 additional registrants will satisfy the revised definition of a SRC and become eligible to use scaled disclosure in their annual reports on Form 10-K. These registrants could experience burden and cost savings under the final rules.190 We estimate that, if all of these registrants used all of the scaled disclosure requirements, they would save an estimated 504,063 burden hours and an aggregate cost of $67,291,651"(SEC Press Release #33-10513, 34-83550 - September 10, 2018, pg. 69-70)
- The SEC made coherent that in order "to conform the Commission's rules to Section 404(c) of the Sarbanes-Oxley Act, these amendments remove the requirement for a non-accelerated filer to include in its annual report a attestation report of the filer's registered public accounting firm. We are also adopting a conforming change to our rules concerning management's disclosure in the annual report regarding inclusion of an attestation report to provide that the disclosure only applies if an attestation report is included. Lastly, we are making a conforming change to Rule 2-02(f) of Regulation S-X to clarify that an auditor of a non-accelerated filer need not include in its audit report an assessment of the issuer's internal control over financial reporting"(SEC Press Release#33-9142 - September 21, 2010, pg. 3)
- "Adopted amendments to the definition of "smaller reporting company". This was meant to expand the number of registrants that qualify as smaller reporting companies and was intended to reduce compliance costs for these registrants and promote capital formation, while maintaining appropriate investor protections. The definition of "smaller reporting company" includes registrants with a public float of less than $250 million, as well as registrants with annual revenues of less than $100 million for the previous year and either no public float or a public float of less than $700 million"(SEC Press Release 33-10513, 34-83550 - September 10,2018, pg. 1)

Appendix B

Description of what was instructed and requested by the United States Public Company Accounting Oversight Board:

- The PCAOB along with approval from the SEC mentioned in instructions for auditing standards that "a direct relationship exists between the degree of risk that a material weakness could exist in a particular area of the company's internal control over financial reporting and the amount of audit attention that should be devoted to that area. In addition, the risk that a company's internal control over financial reporting will fail to prevent or detect misstatement caused by fraud usually is higher than the risk of failure to prevent or detect error. The auditor should focus more of his or her attention on the areas of highest risk. On the other hand, it is not necessary to test controls that, even if deficient, would not present a reasonable possibility of material misstatement to the financial statements"(PCAOB Press Release #2007-005A - PG. A1-8, June 12, 2007).
- It was important to the PCAOB that "the proposed standard on auditing internal control indicated that a company's size and complexity are important considerations and that the procedures an auditor should perform depend upon where along the size and complexity continuum a company falls. The proposed standard included a section on scaling the audit for smaller, less complex companies and would have required auditors to evaluate and document the effect of the company's size and complexity on the audit. This documentation requirement applied to audits of companies of all sizes. The proposed standard also included a list of the attributes of smaller, less complex companies and a description of how the auditor might tailor his or her procedures when these attributes"(PCAOB Press Release #2007-005A - June 12, 2007, pg. 11)
- The PCAOB, along with approval from the SEC, is imperative of "when planning and performing the audit of internal control over financial reporting, the auditor should take into account the results of his or her fraud risk assessment. As part of identifying and testing entity-level controls, as discussed beginning at paragraph 22, and selecting other controls to test, as discussed beginning at paragraph 39, the auditor should evaluate whether the company's controls sufficiently address identified risks of material misstatement due to fraud and controls intended to address the risk of management override of other controls. Controls that might address these risks include -

    Controls over significant transactions that are outside the normal course of business for the company or that otherwise appear to be unusual due to their timing, size, or nature ("significant unusual transactions"), particularly those that result in late or unusual journal entries;

    Controls over journal entries and adjustments made in the period-end financial reporting process;

    Controls over related party transactions;

    Controls related to significant management estimates; and

Controls that mitigate incentives for, and pressures on, management to falsify or inappropriately manage financial results”(PCAOB Press Release #2007-005A - June 12, 2007, pg. A1-9)

- “Entity-level controls vary in nature and precision - Some entity-level controls, such as certain control environment controls, have an important, but indirect, effect on the likelihood that a misstatement will be detected or prevented on a timely basis. These controls might affect the other controls the auditor selects for testing and the nature, timing, and extent of procedures the auditor performs on other controls. Some entity-level controls monitor the effectiveness of other controls. Such controls might be designed to identify possible breakdowns in lower-level controls, but not at a level of precision that would, by themselves, sufficiently address the assessed risk that misstatements to a relevant”(PCAOB Press Release #2007-005A - June 12, 2007, pg. A1-12).
- An auditing instruction proposed by the Public Company Accounting Oversight Board and approved by the Securities and Exchange Commission includes the preface that “3. The auditor's objective in an audit of internal control over financial reporting is to express an opinion on the effectiveness of the company's internal control over financial reporting. Because a company's internal control cannot be considered effective if one or more material weaknesses exist, to form a basis for expressing an opinion, the auditor must plan and perform the audit to obtain competent evidence that is sufficient to obtain reasonable assurance about whether material weaknesses exist as of the date specified in management's assessment. A material weakness in internal control over financial reporting may exist even when financial statements are not materially misstated”(PCAOB Press Release #2007-005A - June 12, 2007, pg. A1-4).
- “Costs have been greater than expected and, at times, the related effort has appeared greater than necessary to conduct an effective audit of internal control over financial reporting”(PCAOB Press Release# 2007-005A - June 12, 2007, pg. 2)
- The PCAOB instructed corporations with regards to auditing to include entity level controls “.24 Entity-level controls include - Controls related to the control environment; Controls over management override; Note: Controls over management override are important to effective internal control over financial reporting for all companies, and may be particularly important at smaller companies because of the increased involvement of senior management in performing controls and in the period-end financial reporting process. For smaller companies, the controls that address the risk of management override might be different from those at a larger company. For example, a smaller company might rely on more detailed oversight by the audit committee that focuses on the risk of management override. The company's risk assessment process; Centralized processing and controls, including shared service environments; Controls to monitor results of operations; Controls to monitor other controls, including activities of the internal audit function, the audit committee, and self-assessment programs; Controls over

the period-end financial reporting process; and Policies that address significant business control and risk management practices. .25 Control Environment. Because of its importance to effective internal control over financial reporting, the auditor must evaluate the control environment at the company. As part of evaluating the control environment, the auditor should assess whether management's philosophy and operating style promote effective internal control over financial reporting; Whether sound integrity and ethical values, particularly of top management, are developed and understood; and Whether the Board or audit committee understands and exercises oversight responsibility over financial reporting and internal control. .26 Period-end Financial Reporting Process. Because of its importance to financial reporting and to the auditor's opinions on internal control over financial reporting and the financial statements, the auditor must evaluate the period-end financial reporting process. The period-end financial reporting process includes the following - Procedures used to enter transaction totals into the general ledger; Procedures related to the selection and application of accounting policies; Procedures used to initiate, authorize, record, and process journal entries in the general ledger; Procedures used to record recurring and nonrecurring adjustments to the annual and quarterly financial statements; and Procedures for preparing annual and quarterly financial statements and related disclosures. Note: Because the annual period-end financial reporting process normally occurs after the "as-of" date of management's assessment, those controls usually cannot be tested until after the as-of date"(PCAOB Press Release#2007-005A – June 12, 2007, PG. (A1-13)-(A1-15)).

- "The auditor should use the same suitable, recognized control framework to perform his or her audit of internal control over financial reporting as management uses for its annual evaluation of the effectiveness of the company's internal control over financial reporting"(PCAOB Release# Adopting 2007-1005A with AS2001 – December 15, 2020, PG. 129).
- "Matters relating to the company's business, including its organization, operating characteristics, and capital structure; The extent of recent changes, if any, in the company, its operations, or its internal control over financial reporting; The auditor's preliminary judgments about materiality, risk, and other factors relating to the determination of material weaknesses; Control deficiencies previously communicated to the audit committee or management; Legal or regulatory matters of which the company is aware; The type and extent of available evidence related to the effectiveness of the company's internal control over financial reporting;"(PCAOB Release# Adopting 2007-1005A with AS2201 – December 15, 2020, PG. 130).
- ".15 If the auditor identifies deficiencies in controls designed to prevent or detect fraud during the audit of internal control over financial reporting, the auditor should take into

account those deficiencies when developing his or her response to risks of material misstatement during the financial statement audit, as provided in AS 2110.65-.69." (PCAOB Release# Adopting 2007-1005A with AS2201 – December 15, 2020, PG. 132)

- "A top-down approach begins at the financial statement level and with the auditor's understanding of the overall risks to internal control over financial reporting. The auditor then focuses on entity-level controls and works down to significant accounts and disclosures and their relevant assertions. This approach directs the auditor's attention to accounts, disclosures, and assertions that present a reasonable possibility of material misstatement to the financial statements and related disclosures. The auditor then verifies his or her understanding of the risks in the company's processes and selects for testing those controls that sufficiently address the assessed risk of misstatement to each relevant assertion" (PCAOB Release# Adopting 2007-1005A with AS2201 – December 15, 2020, PG. 133)
- "Matters relating to the company's business, including its organization, operating characteristics, and capital structure; The extent of recent changes, if any, in the company, its operations, or its internal control over financial reporting; The auditor's preliminary judgments about materiality, risk, and other factors relating to the determination of material weaknesses; Control deficiencies previously communicated to the audit committee or management; Legal or regulatory matters of which the company is aware; The type and extent of available evidence related to the effectiveness of the company's internal control over financial reporting" (PCAOB Release# Adopting 2007-1005A with AS2001 – December 15, 2020, PG. 130).
- "Exposure to losses in the account; possibility of significant contingent liabilities arising from the activities reflected in the account or disclosure; existence of related party transactions in the account; and changes from the prior period in account or disclosure characteristics." (PCAOB Release# Adopting 2007-1005A with AS2201 – December 15, 2020, PG. 136)

Appendix C

These tables represent the research conducted with the data:

1) Firm that conducted the audit for the corporation that was in the representative sample of thirty

Company	Firm that conducted audit for 10-K Form
3M Company	PriceWaterhouseCoopers LLP
AFLAC Incorporated	KPMG LLP
Agilent Technologies, Inc.	PriceWaterhouseCoopers LLP
Amgen Inc.	Ernst and Young LLP
Warner Brothers Discovery	PriceWaterhouseCoopers LLP
Apple Computer, Inc.	Ernst and Young LLP
ARAMARK Corporation	Deloitte and Touche LLP
AT&T Corp.	Ernst and Young LLP
Berkshire Hathaway Inc.	Deloitte and Touche LLP
The Boeing Company	Deloitte and Touche LLP
Citigroup, Inc	KPMG LLP
CVS Corp.	Ernst and Young LLP
Deere & Company	Deloitte and Touche LLP
General Motors Corporation	Ernst and Young LLP
H.B. Fuller Company	Ernst and Young LLP
Hilton Hotels Corp	Ernst and Young LLP
Home Depot Inc.	KPMG LLP
J.P. Morgan Chase & Co.	PriceWaterhouseCoopers LLP
Kellogg Company	PriceWaterhouseCoopers LLP
Marathon Oil Corporation	PriceWaterhouseCoopers LLP
Northrop Grumman Corporation	Deloitte and Touche LLP
Pacific Gas & Electric Corp.	Deloitte and Touche LLP
Texas Instruments Inc.	Ernst and Young LLP
Tyson Foods Inc	PriceWaterhouseCoopers LLP
UnitedHealth Group Incorporated	Deloitte and Touche LLP
Wal-Mart Stores Inc	Ernst and Young LLP
Walt Disney Co	PriceWaterhouseCoopers LLP
Wells Fargo & Company	KPMG LLP
Wyndham International Inc	Deloitte and Touche LLP
Zions Bancorporation	Ernst and Young LLP

2) Factors mentioned in surveys conducted by accounting firms

What Investors Want To Know And Think	Percentage	Source of Survey
"Financial statements and note disclosures"	89%	PwC-Global-Investor-Survey-2022
"Materiality Assessment Disclosures"	78%	PwC-Global-Investor-Survey-2022
"Regulatory Risk Management"	78%	PwC-Global-Investor-Survey-2022
"Disclosure is an annual report strategy, risks, opportunities, and other value drivers can have a direct impact on a company's cost of capital"	Strongly Agree 27%, Agree 36%	PwC-Investors-Survey-Powerful…
"A business model explanation should focus primarily on how a company makes company"	Strongly Agree 44%, Agree 26%	PwC-Investors-Survey-Powerful…
"Importance of how the company generates cash"	87%	PwC-Investors-Survey-Powerful…
"Importance of how the company creates value"	86%	PwC-Investors-Survey-Powerful…
"Importance of dependencies on key relationships and resources"	74%	PwC-Investors-Survey-Powerful…
"Importance of how the business is positioned in its wider value chain"	73%	PwC-Investors-Survey-Powerful…
"Importance of the company's overall explanation of its strategy"	83%	PwC-Investors-Survey-Powerful…
"Importance of information about progress made against key priorities and actions"	80%	PwC-Investors-Survey-Powerful…
"Do companies disclose enough information on future strategic plans to allow me to feel comfortable with the judgements I need to make"	Strongly Agree 1%, Agree 13%	PwC-Investors-Survey-Powerful-Stories-Through-Integrated-Reporting
"Understanding management's view of potential risks and their mitigation strategies is important"	Strongly Agree 55% Agree 38%	PwC-Investors-Survey-Powerful-Stories-Through-Integrated-Reporting
"There is too much 'boilerplate' risk disclosure in company reports, so I don't find them very effective"	Strongly Agree 36% Agree 40%	PwC-Investors-Survey-Powerful-Stories-Through-Integrated-Reporting
"Clear links between a company's strategic goals, risks, key performance indicators and financial	Strongly Agree 56%	PwC-Investors-Survey-Powerful-Stories-Through-Integ

statements is helpful"	Agree 31%	rated-Reporting
"I am more likely to spend time analyzing an annual report / 10-K/20-F when I feel management has made an effort to tell the story of the company in a clear and transparent way"	Strongly Agree 67% Agree 24%	PwC-Investors-Survey-Powerful-Stories-Through-Integrated-Reporting
"Needed to set a long-term business strategy that creates value"	93%	Making Corporate Purpose Tangible - A Survey of Investors
"Companies did not provide any operating measures of performance"	21%	KPMG-Survey-Business-Reporting

3) SEC and PCAOB Political Positions

Political Position	Name	Private Sector Affiliation
Chairman of the SEC	Gary Gensler	Was partner and co-head of finance at Goldman Sachs
SEC Commissioner	Mark Uyeda	Worked at K & L Gates, O'Melveny and Myers
General Counsel for the SEC	Megan Barbero	N/A
PCAOB Chair	Erika Williams	Litigation Partner at Kirkland and Ellis LLP
PCAOB Board Member	Christina Ho	Senior Manager at Deloitte and Touche LLP
PCAOB Board Member	Kara M. Stein	N/A
PCAOB Board Member	George R. Botic	Earlier in his career, he was a senior manager with PwC
PCAOB Board Member	Anthony C. Thompson	N/A

4) The number of audits each big four accounting firm conducted for the sample of thirty corporations

PriceWaterhouseCoopers	Deloitte	KPMG	Ernst and Young
8	8	4	10

5) The factors and characteristics that were mentioned in the 10-K forms of the thirty selected corporations

A. First set of factors and characteristics

Corporation Name	Number of Foreign Assets	Number of Foreign Debt	Number of Domestic Debt	Number of Domestic Assets	Debt to Equity Ratio
3M Company	Yes	Yes	Yes	Not Explicitly	No
AFLAC Incorporated	No	No	No	No	No
Agilent Technologies, Inc.	No	No	No	No	No
Amgen Inc.	Yes	Yes	No	No	No
Warner Brothers Discovery	Yes	No	No	Yes	No
Apple Computer, Inc.	No	No	No	No	No
ARAMARK Corporation	No	No	No	No	No
AT&T Corp.	No	No	No	No	No
Berkshire Hathaway Inc.	No	No	No	No	No
The Boeing Company	No	No	No	No	No
Citigroup, Inc	No	No	No	No	No
CVS Corp.	Yes	No	No	No	No
Deere & Company	No	No	No	No	No
General Motors Corporation	No	No	No	No	No
H.B. Fuller Company	No	No	No	No	No
Hilton Worldwide Holdings Inc.	No	No	No	No	No
Home Depot Inc.	No	No	No	No	No
J.P. Morgan Chase & Co.	No	No	No	No	No
Kellogg Company	No	No	No	No	No
Marathon Oil Corporation	No	No	No	No	No
Northrop Grumman Corporation	No	No	No	No	Yes
Pacific Gas & Electric Corp.	No	No	No	No	No
Texas Instruments Inc.	No	No	No	No	No
Tyson Foods Inc	No	No	No	No	No
UnitedHealth Group Incorporated	No	No	No	No	No
Wal-Mart Stores Inc	No	No	No	No	No

Walt Disney Company	No	Yes	No	No	No
Wells Fargo & Company	No	No	No	No	No
Wyndham International Inc	No	No	No	No	No
Zions Bancorporation	No	Yes	No	No	No

B. Second set of factors and characteristics

Corporation Name	Debt to Revenue Ratio	Number of Total Assets	Number of Total Liabilities	Total Derivative Payables	Percent Change on Operating Revenues
3M Company	No	Yes	Yes	No	No
AFLAC Incorporated	No	Yes	Yes	No	No
Agilent Technologies, Inc.	No	Yes	Yes	No	No
Amgen Inc.	No	Yes	Yes	Yes	No
Warner Brothers Discovery	No	Yes	Yes	No	No
Apple Computer, Inc.	No	Yes	Yes	Yes	No
ARAMARK Corporation	No	Yes	Yes	No	No
AT&T Corp.	No	Yes	Yes	Yes	Yes
Berkshire Hathaway Inc.	No	Yes	Yes	Yes	Yes
The Boeing Company	No	Yes	Yes	No	Yes
Citigroup, Inc	No	Yes	Yes	Yes	No
CVS Corp.	No	Yes	Yes	No	No
Deere & Company	No	Yes	Yes	No	No
General Motors Corporation	No	Yes	Yes	No	No
H.B. Fuller Company	No	Yes	Yes	No	No
Hilton Worldwide Holdings Inc.	No	Yes	Yes	No	No
Home Depot Inc.	No	Yes	Yes	Yes	No
J.P. Morgan Chase & Co.	No	Yes	Yes	Yes	No
Kellogg Company	No	Yes	Yes	Yes	No
Marathon Oil Corporation	No	Yes	Yes	Yes	No
Northrop Grumman	Yes	Yes	Yes	No	No

Corporation					
Pacific Gas & Electric Corp.	No	Yes	Yes	No	No
Texas Instruments Inc.	No	Yes	Yes	No	No
Tyson Foods Inc	No	Yes	Yes	No	No
UnitedHealth Group Incorporated	No	Yes	Yes	No	No
Wal-Mart Stores Inc	No	Yes	Yes	No	No
Walt Disney Company	No	Yes	Yes	Yes	Yes
Wells Fargo & Company	No	Yes	No	No	No
Wyndham International Inc	No	Yes	Yes	No	No
Zions Bancorporation	No	Yes	Yes	Yes	No

C. Third set of factors and characteristics

Corporation Name	Percentage Change on Operating Income	Mentions Expected Growth Areas	States Liquidity and Capital Resources	Includes Auditor Attestation Report	"management's view of potential risks and their mitigation strategies"
3M Company	No	Yes	Yes	Yes	Yes
AFLAC Incorporated	No	Yes	Yes	Yes	Yes
Agilent Technologies, Inc.	No	Yes	Yes	Yes	Yes
Amgen Inc.	Yes	No	Yes	Yes	Yes
Warner Brothers Discovery	Yes	Yes	Yes	Yes	Yes
Apple Computer, Inc.	No	No	Yes	Yes	Yes
ARAMARK Corporation	Yes	Yes	Yes	Yes	Yes
AT&T Corp.	Yes	Yes	Yes	Yes	Yes
Berkshire Hathaway Inc.	No	Yes	Yes	Yes	Yes
The Boeing Company	No	Yes	Yes	Yes	Yes
Citigroup, Inc	No	No	Yes	Yes	Yes
CVS Corp.	Yes	Yes	Yes	Yes	Yes

Deere & Company	No	Yes	Yes	Yes	Yes
General Motors Corporation	No	Yes	Yes	Yes	Yes
H.B. Fuller Company	Yes	Yes	Yes	Yes	Yes
Hilton Worldwide Holdings Inc.	No	Yes	Yes	Yes	Yes
Home Depot Inc.	Yes	Yes	Yes	Yes	Yes
J.P. Morgan Chase & Co.	No	Yes	Yes	Yes	Yes
Kellogg Company	No	Yes	Yes	Yes	Yes
Marathon Oil Corporation	No	Yes	Yes	Yes	Yes
Northrop Grumman Corporation	Yes	Yes	Yes	Yes	Yes
Pacific Gas & Electric Corp.	No	No	Yes	Yes	Yes
Texas Instruments Inc.	No	Yes	Yes	Yes	Yes
Tyson Foods Inc	Yes	Yes	Yes	Yes	Yes
UnitedHealth Group Incorporated	No	No	Yes	Yes	Yes
Wal-Mart Stores Inc	Yes	Yes	Yes	Yes	Yes
Walt Disney Company	Yes	Yes	Yes	Yes	Yes
Wells Fargo & Company	No	No	No	No	Yes
Wyndham International Inc	Yes	Yes	Yes	Yes	Yes
Zions Bancorporation	No	Yes	Yes	Yes	Yes

D. Fourth set of factors and characteristics

Corporation Name	"how the company generates cash"	Mentioned Basis For Opinion in Accordance of the Standards of the PCAOB	Included Amount of USD Notes and Debt Issuances	Stated whether or not Non-GAAP standards such as IFAS were used or followed	Mentioned Steps Were Taken For Fraud and Misstatement Detection
3M Company	Yes	Yes	Yes	Yes	Yes

AFLAC Incorporated	Yes	Yes	Yes	Yes	Yes
Agilent Technologies, Inc.	Yes	Yes	Yes	No	No
Amgen Inc.	Yes	Yes	Yes	No	No
Warner Brothers Discovery	Yes	Yes	Yes	No	Yes
Apple Computer, Inc.	No	Yes	Yes	No	Yes
ARAMARK Corporation	Yes	Yes	Yes	Yes	No
AT&T Corp.	Yes	Yes	Yes	No	Yes
Berkshire Hathaway Inc.	Yes	Yes	Yes	No	Yes
The Boeing Company	Yes	Yes	Yes	No	Yes
Citigroup, Inc	Yes	Yes	Yes	Yes	Yes
CVS Corp.	Yes	Yes	Yes	Yes	Yes
Deere & Company	Yes	Yes	Yes	Yes	Yes
General Motors Corporation	Yes	Yes	No	Yes	Yes
H.B. Fuller Company	Yes	Yes	Yes	Yes	Yes
Hilton Worldwide Holdings Inc.	Yes	Yes	No	No	Yes
Home Depot Inc.	Yes	Yes	No	Yes	Yes
J.P. Morgan Chase & Co.	Yes	Yes	Yes	Yes	Yes
Kellogg Company	Yes	Yes	No	Yes	Yes
Marathon Oil Corporation	Yes	Yes	No	No	Yes
Northrop Grumman Corporation	Yes	Yes	No	Yes	Yes
Pacific Gas & Electric Corp.	Yes	Yes	Yes	Yes	Yes
Texas Instruments Inc.	Yes	Yes	Yes	Yes	Yes
Tyson Foods Inc	Yes	Yes	Yes	Yes	Yes
UnitedHealth Group Incorporated	Yes	Yes	Yes	No	Yes
Wal-Mart Stores Inc	Yes	Yes	Yes	Yes	Yes
Walt Disney Company	Yes	Yes	Yes	No	Yes
Wells Fargo & Company	No	No	No	No	No
Wyndham International Inc	Yes	Yes	Yes	No	Yes

Zions Bancorporation	Yes	Yes	No	Yes	Yes

6) Page Numbers of where factors were found in the corporate 10- K form

Company Name	**10- K Form - Pages of Where I found information**
3M Company	10 -16, 19, 42, 45, 48 - 69, 74, 87-88, 125-126
Aflac Incorporated	12-27, 32-35, 39-43, 78, 84, 87, 92, 176-177
Agilent Technologies	3-17, 29-34, 53-61,70-71, 112
Amgen Inc.	27-46, 51-53, 55-56, 77-80
Warner Brother Discovery	2-5, 13-26, 35, 47-50, 54-57 77,124
Apple Computer, Inc.	5-16, 20-26, 40-41, 52-53,
Aramark Corporation	9-20, 25-26, 32-36, 41-44
AT&T Corporation	8-14, 18-22, 38-46, 53-56, 98
Berkshire Hathaway	(K-13)-(K-17), K-25, K-33, (K-67) - (K-76), K-114
The Boeing Company	6-16, 20-28, 37-52, 58-75, 122
Citi Group	14, 51-53, 129-133, 132-135, 246, 325,
CVS	79, 87-90, 108, 142, 180 - 182,
Deere & Company	9-10, 14-23, 34-35, 46, 69,
General Motors	1, 14-23, 25, 36-37, 49-53, 54
H.B. Fuller Company	7-11, 15, 21, 23, 24, 26, 27, 29-30, 34, 49
Hilton Worldwide Holdings, Inc.	21-39, 56-57, 65-70, 72-77, 107-110
Home Depot, Inc.	1-4, 7, 10-21, 29-30, 31, 35, 36, 45, 58, 64
J.P. Morgan Chase & Co.	4, 5, 9-32, 45, 47, 52, 53, 57-67, 97, 156-158, 161, 279,
Kellogg Company	3, 21,28, 41, 43, 56, 93, 102, 103
Marathon Oil Corporation	4, 20-32, 42-43, 48, 49, 55, 56, 57, 60
Northrop Grumman	1-2, 10-23, 19-22, 31-33, 42-43, 51, 55, 56, 80
Pacific Gas & Electric Corporation	8-11, 14-23, 37-38, 39-44, 43-49, 51, 68 -70, 73,

	131-132, 145-146, 182-186, 187
Texas Instruments	6-8, 9-19, 20-21, 26-28, 49-50, 55-56
Tyson Foods	7-8, 4-18,12-23, 30, 32, 33, 34, 35, 38, 40, 41, 42, 49, 89, 90
Walmart	13, 15-26, 32, 33, 38, 39, 40, 43, 44, 45, 51, 52, 56
Walt Disney Company	1, 12, 21-25, 37, 39, 46-50, 64, 65 - 66, 69, 90, 92, 107
Wells Fargo	2, 3, 4, 6, 8, 9
Wyndham	6, 12, 13-21, 27, 35-36 (F-6), F-3, F-2, (F-24 to F-26), 37
Zions Bancorporation	6-7, 12-20, 31, 70, 72, 75, 76, 102-106, 118,

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