EQUITY MARKET REACTION TO THE SECURITIES AND EXCHANGE COMMISSION (SEC) CORPORATE DISCLOSURE: EXECUTIVE COMPENSATION

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DEDICATION

First and foremost, I dedicate this thesis to the Almighty God for conferring me the strength, perseverance, and guidance to go through this study successfully.

This piece of work is also dedicated to my loving wife, Mrs. Vidaline Akumaning, without whom I would not have had the strength to complete this program. Her patience, understanding, support, and encouragement were incredible. Indeed, she inspired me in every step to accomplish this significant milestone in my life.

Finally, I dedicate this work to my late parents, Mr. & Mrs. Akumaning, for bringing me up in a God-fearing manner, which has brought me this far.

ABSTRACT

Corporate disclosure is crucial for corporate governance as it reduces information asymmetry, misalignment of investors' interests, and other agency costs. Therefore, the US Security and Exchange Commission (SEC) has adopted various disclosure regulations to provide investors and other stakeholders with more transparent and comparable information about executive compensation. This quantitative study seeks to expand the body of knowledge by adopting an event study methodology to explore the stock market reaction to increased corporate disclosure of executive pay for US public firms. The population of this research comprises American-listed firms from 2021-2022. I employ a final sample of 2,914 firms for the complete sample analysis. Applying Zellner's Seemingly Unrelated Regression (SUR) methodology, I provide evidence that the equity market reacts positively to all the news announcements, giving rise to the 2022 SEC's final executive compensation disclosure rules adopted on August 25, 2022. This positive market response confirms the prediction that increased compensation disclosure improves governance. The results also suggest that enhanced corporate disclosure increases shareholder value by reducing agency costs linked to information asymmetry. In addition, the positive daily abnormal returns tend to be stronger for small firms versus large ones for the initial publication and the final rules. This suggests that small firms have more information asymmetry, uncertainty, and risks and thus react more positively than large companies that likely have less information asymmetry and uncertainty.

Keywords: Corporate governance, executive compensation, agency theory, seemingly unrelated regression (SUR), information disclosure, asymmetry information

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LIST OF ABBREVIATIONS

AR	Abnormal Returns
CAR	Cumulative Abnormal Returns
CEO	Chief Executive Officer
CRSP	Center for Research in Security Prices
FF3	Fama-French Three-factor
FFC4	Fama-French-Carhart Four-factor
H1	Hypothesis One
H2	Hypothesis Two
HML	High Minus Low (Value Factor)
IFRS	International Financial Reporting Standards
MD&A	Management Discussions and Analysis
NEO	Named Executive Officers
PEO	Principal Executive Officer
PFO	Principal Financial Officer
SEC	Securities and Exchange Commission
SMB	Small Minus Big (Size Factor)
SOX	Sarbanes-Oxley Act
SUR	Seemingly Unrelated Regression
TSR	Total Shareholder Return
UMD	Momentum Factor
USA	United States of America
VWRETD	Value-weighted Returns (CRSP Market Return)
WRDS	Wharton Research Data Science

CHAPTER ONE: INTRODUCTION

Corporate disclosure, particularly regarding executive compensation, plays a significant role in providing transparency and accountability to stakeholders in the financial markets. This transparency is necessary for mitigating agency conflicts, reducing information asymmetries, and enhancing overall governance practices, as highlighted by Jensen and Meckling (1976) and supported by Healy and Palepu (2001). The Securities and Exchange Commission (SEC) operates as the primary regulatory body overseeing corporate disclosures in the United States of America (U.S.A.). Understanding how the equity market responds to the SEC disclosures on executive compensation is essential for investors, regulators, policymakers, and practitioners.

The agency theory of Jensen and Meckling (1976) posits that the separation of ownership and control creates agency conflicts, information asymmetry, and misalignment of interests between shareholders and management. From the agency theory perspective, disclosure of executive compensation details is crucial to mitigate these conflicts by providing shareholders and investors with comprehensive information, aligning interests, and enhancing corporations' overall corporate governance practices. In addition, various studies provide the framework for relating disclosure to governance, acknowledging that disclosure is significant for corporate governance (Alves et al., 2012; Goh et al., 2020).

Despite the pivotal role of executive remuneration disclosure in governance, challenges persist due to information asymmetry and uncertainty. These concerns detrimentally impact corporate governance, leading to accounting catastrophes, bankruptcy, and unnecessary panic in the capital market (Ho et al., 2023; Leuz & Wysocki, 2016; Yang, 2021), as observed in past corporate scandals like WorldCom and Enron. This can negatively affect shareholders, investors,

workers, policymakers, and regulators. Adopting mandatory disclosure guidelines seeks to address these gaps to promote transparency, accountability, and investor protection.

Notwithstanding the significance of this topic, there remains a gap in the literature that specifically addresses the equity market reaction to the 2022 SEC's corporate disclosure of executive remuneration in the market. Therefore, this study seeks to address this gap in knowledge by analyzing the stock market participants' responses to several events leading up to specific SEC disclosures, such as SEC filings related to executive compensation. The significance of studying stock market reactions to SEC corporate disclosure lies in its implications for investor decision-making, market efficiency, and corporate governance practices. This research provides insights into how regulatory changes shape market perceptions, governance practices, and investor behavior, ultimately impacting corporate transparency and accountability.

The objective of this quantitative event study is to evaluate investors' reactions to the SEC's corporate disclosures on executive compensation requirements for listed companies in the U.S.A. Specifically, this research focuses on the stock market response to the regulatory changes, investigating how investors perceive and react to events leading up to the proposed and final rules on executive remuneration disclosure adopted on August 25, 2022. As shown in Table 1, the primary announcements related to the proposed and final executive compensation disclosure amendments occurred on January 27, 2022, and August 25, 2022, respectively. Adopting quantitative event study methodology combined with the SUR regression analysis and Fama-McBeth (1973), the study analyzes shareholder reactions, highlighting the positive impact of disclosures and transparency on reducing agency costs and improving governance.

Using a final sample of 2,914 American-listed companies from 2021 to 2022, I observe that the stock market reacts positively to the news announcements paving the way for the U.S. Security and Exchange Commission's final rules on executive compensation disclosure. This finding suggests that investors consider the new disclosure rules to reduce agency costs and enhance corporate governance. Furthermore, the market reaction is significantly more favorable for small firms than large ones due to small firms' higher information uncertainty.

The findings of this research contribute to the literature in three ways. First, this research focuses on the stock market response to the SEC's new executive compensation disclosure rules, contributing to the mandatory information disclosure literature. To the best of my knowledge, this is the first paper to comprehensively analyze the stock market reaction to the 2022 SEC executive remuneration disclosure requirements to provide valuable insights into how investors perceive and respond to such information. Understanding investor behavior and market dynamics in reaction to such disclosures contributes to broader insights into investor decision-making processes, information asymmetry, and market efficiency.

Next, this paper contributes evidence to the corporate governance literature by exploring how managers disclose new and value-relevant information about executive remuneration to investors. Executive compensation disclosures mandated by the SEC are critical to corporate transparency and governance. By examining the equity market response to the SEC disclosures on executive pay, this study seeks to shed light on how corporate governance practices, particularly those related to executive compensation, influence investment strategies.

Lastly, by focusing on the equity market's reactions to executive remuneration disclosures, this study contributes to the ongoing discussion and debate on investors' reactions to the increased disclosure of executive compensation and whether giving such information to

investors is beneficial. Information transparency related to executive remuneration is a theme of considerable interest and debate among scholars and practitioners alike. For example, Balsam et al. (2016) and Yang (2021) argue that expanding information disclosure related to executive pay can reduce information uncertainty, enhance transparency and investment decision-making, and boost public confidence. However, Frantz et al. (2013) caution public firms to be thoughtful when making such disclosures as there is a cost of strategic opponents accessing such disclosures.

The remainder of this paper is structured as follows: Section Two provides a literature review on related studies and the formulation of the study hypotheses. Section Three describes the methodology and data sources used in the study. Section Four presents the analysis of equity market reactions, the SUR regression results, and a discussion of the findings. Finally, Section Five concludes with implications, limitations, and recommendations for future research.

CHAPTER TWO: LITERATURE REVIEW

2.1 Theoretical Background

In this section, I present the theoretical framework that forms the backbone of our research, guiding my approach to addressing the research problem at hand. The goal is to offer readers a deeper understanding of the theoretical underpinnings driving this investigation. At the core of this study lies the agency theory, a business theory that serves as the conceptual foundation for our work.

2.1.1 Agency Theory

The agency model proposed by Jensen and Meckling (1976) posits that the contractual relationship between shareholders and managers mirrors that of a principal and an agent, where

shareholders act as principals and managers as agents. This agency relationship empowers shareholders to delegate operating authority and managerial control to top executives and compensate them for their services (Thompson et al., 2016). However, inherent agency problems arise due to this separation of ownership and control, particularly concerning widely dispersed stockholders. This division leads to opportunistic behaviors, conflicts of interest, information disparities, and a misalignment of goals between shareholders and managers (Naciti, 2019).

Moreover, the agency model emphasizes that since both parties are utility maximizers, managers may prioritize decisions that do not necessarily align with the best interests of shareholders, resulting in agency conflicts or costs for stockholders. Consequently, Jensen and Meckling (1976) advocate implementing appropriate incentives to maximize investor wealth. These incentives should work toward aligning the potentially divergent interests of management and shareholders through an optimal compensation structure that rewards superior corporate performance.

The study employs the agency theory as a theoretical framework to understand the information disclosure practices of public firms regarding executive remuneration and to test the underlying hypothesis deductively. According to the agency theory, the separation of ownership and control creates information asymmetry between shareholders and managers, a gap that can be bridged through transparent information disclosure (Healy & Palepu, 2001; Odewale & Kamardin, 2015). Information disclosure serves as a mechanism to mitigate information asymmetry and align the interests of managers and shareholders. Accordingly, enhanced corporate disclosure and transparency are expected to improve CEO compensation practices, mitigate potential agency issues, and align the interests of shareholders and managers to maximize shareholder value (Muzata & Marozva, 2022; Setiany & Suhardjanto, 2021).

2.2 Information Disclosure and Information Asymmetry

Information disclosures by public companies have been the theme of extensive finance and accounting research due to information asymmetry in the capital market (Pruthi & Koul, 2019). Information asymmetry refers to a situation where management holds crucial information about the company, creating an information disadvantage for shareholders (Herdjiono & Yanti, 2023; Jain & Rezaee, 2006). On the contrary, Lev (1992) describes disclosure as a management's attempt to communicate a firm's quantitative and qualitative information of a retrospective and prospective nature to investors.

Corporate disclosures fall into two categories: mandatory and voluntary disclosures. Mandatory corporate disclosures are required by laws and regulations, usually provided through regulated annual financial reports covering financial statements, footnotes, management discussions and analysis (MD&A), and other regulatory filings, such as proxy and information statements (Gunawan & Lina, 2015; Healy & Palepu, 2001). Conversely, voluntary corporate disclosures are not required by laws and regulations but entail the presentation of information beyond mandatory disclosure, which is of substantial value to the investors and market (Gunawan & Lina, 2015; Lev, 1992).

Quality and transparent disclosures convey valuable information to the market that can mitigate information asymmetry between managers and shareholders (Ho et al., 2023; Pruthi & Koul, 2019; Putra & Hatta, 2023), reducing uncertainty. Several scholars have probed the link between information disclosure and information asymmetry, and the conclusions are that information disclosure practices reduce information asymmetry and positively impact the capital market (Pruthi & Koul, 2019; Setiany & Suhardjanto, 2021). Corroborating this assertion,

Setiany and Suhardjanto (2021) document that by reducing information asymmetry via increased disclosure, management can decrease the firms' cost of equity.

Similarly, Abdollahi et al. (2023) observe a substantially positive relationship between information risk and the cost of equity. To this end, Herdjiono and Yanti (2023) bring to light that asymmetric information emerges from an agency conflict, allowing management to have more information than the shareholders. Additionally, the provision of mandatory financial and accounting disclosures through financial reports, including financial statements, footnotes, management discussions and analysis (MD&A), and other regulatory filings, such as proxy and information statements, can reduce information asymmetry (Healy & Palepu, 2001),

By making more information available to the public either mandatorily or voluntarily, corporations may increase their values, allowing investors to better assess the firm's cashflow-generating capabilities or reduce the cost of capital (Esther & Henry, 2018). For example, Gordon et al. (2010) report that information security disclosure positively affects the firm's market value. Moreover, Huang et al. (2013) reveal that over 80% of the firms they studied show compliance with the mandatory earning forecast disclosure, suggesting that firms increasingly make information available to investors.

While information disclosures are necessary, there are associated costs, including the costs of creating and disseminating accounting information and the cost of competitors accessing critical information about the company (Esther & Henry, 2018). Consequently, increasing information disclosure may boost firms' credibility, lower agency costs, control manager's self-interest, and compel corporate managers to offer accounting information by establishing accounting standards and practices, increasing the quality and transparency of the disclosures (Ho et al., 2023; Herdjiono & Yanti, 2023; Pruthi & Koul, 2019).

2.3 Corporate Information Disclosure and Corporate Governance

Theoretical literature emphasizes the significant impact of mandatory financial information disclosure on corporate governance. Mandated disclosure is crucial as it plays a vital role in governance and ensures the accountability of the board of directors regarding executive compensation (Mas, 2016; Ntim et al., 2015). Transparent information disclosure provides valuable data that allows investors to evaluate the suitability of incentive schemes, performance measures, and managerial actions (Yang, 2021). Various studies have proposed models linking information disclosure to corporate governance (Alves et al., 2012; Goh et al., 2020; Hermalin & Weisbach, 2012; Huang & Zhang, 2012; Yi, 2023). Assidi (2023) highlights how information disclosure enhances transparency and adds value to a company. Similarly, Healy and Palepu (2001) argue that disclosing relevant information enables investors to monitor firms closely and assess management's resource utilization.

Corporate governance aims to establish controls, ensuring that management acts in the best interests of shareholders and stakeholders (Kanagaretnam et al., 2007; Esther & Henry, 2018). The corporate board often includes an audit committee responsible for internal controls, auditing oversight, and improving financial reporting quality (Herdjiono & Yanti, 2023; Gunawan & Lina, 2015). Additionally, many firms have a compensation committee, typically comprising independent directors, tasked with designing pay packages that appropriately reward CEOs for creating shareholder value (Chen et al., 2015; Thompson et al., 2016). Vafeas and Afxentiou (1998) observe significant changes in compensation committees' structures after adopting new SEC pay disclosure rules in 1992 to enhance governance in public firms.

Esther and Henry (2018) argue for high-quality and transparent disclosures from the board of directors (BOD) to shareholders, especially regarding operating results and financial

position. Information disclosure and financial reporting are critical in communicating governance and executive compensation to outside investors, helping them understand how boards compensate executives (Byrd & Hickman, 1995; Healy & Palepu, 2001). Hermalin (2005) suggests that improved corporate governance contributes to CEO compensation increases. Research indicates a positive link between corporate governance and information disclosure transparency, stressing the importance of information disclosure in governance (Goh et al., 2020). Ben-Amar and Zeghal (2011) find that board independence correlates positively with executive pay-related information transparency in a sample of 181 Canadian-listed firms.

Amidst growing concerns about corporate disclosure, stakeholders emphasize the importance of disclosure, especially regarding directors' remuneration and financial information, due to its substantial impact on corporate governance (Odewale & Kamardin, 2015; Wang et al., 2020). Executive remuneration and financial disclosure are integral components of governance disclosure that contribute to the corporate information system (Yang, 2021). These insights are crucial for understanding the pivotal role of information disclosure in corporate governance systems (Ho et al., 2023).

2.4 Corporate Disclosure, Investor Reaction, and Executive Compensation

Prior studies have highlighted the impact of information disclosures on market reactions (Healy & Palepu, 2001; Schoenfeld, 2017) and the reduction of information asymmetry (Setiany & Suhardjanto, 2021). Moreover, Gunawan and Lina (2015) underscore that investors' precise and immediate response to fresh information can increase stock price, trading volume, and efficient market conditions, leading to a new equilibrium price that perfectly reflects the available information. Equally, Schoenfeld (2017) documents that strengthening information

disclosure enhances stock liquidity. However, adopting an event study method, Liu et al. (2020) report that stock markets in affected nations fell promptly after the COVID-19 virus eruption.

Previous studies have utilized event study methodology to gauge investors' reactions to the implementation of various regulations, such as the adoption of performance plans as observed by Garver et al. (1992) and Larcker (1983). However, the focus of this paper, which examines equity market responses to regulatory events linked to the 2022 SEC's proposed and final rules on remuneration disclosure, is arguably more akin to studies assessing investors' reactions to comprehensive legislation, like the Sarbanes-Oxley Act (SOX) as studied by Jain and Rezae (2006) and Thapa & Brown (2004), and the entire suite of accounting standards (IFRS) studied by Armstrong et al. (2010).

In Larcker's (1983) study, a notably positive stock market reaction is documented for a sample of 21 firms that implemented performance plans between 1971 and 1978. Conversely, Garver et al. (1992) find no significant stock market reaction in a sample of 209 adoptions over a two-day announcement period from 1971 to 1980. Additionally, Chow (1983) discovers negative abnormal stock returns when analyzing stock reactions to events tied to the passage of Acts. Similarly, Pan et al. (2022) explore the equity market's response to new CEO-worker pay ratio disclosures by U.S. public firms in 2018, affirming that stock markets tend to react negatively to high pay ratio disclosures.

The current study focuses on a regulatory amendment that alters information disclosures related explicitly to executive compensation disclosed to shareholders in annual proxy statements (Lo, 2003). The response of investors in U.S. corporations to the 2022 SEC's recent compensation disclosure regulation remains to be determined. However, there is an expectation that investors will react positively to events leading up to the proposed and final rule if they

anticipate improved corporate governance, enhanced transparency in compensation disclosure, and reduced information asymmetry, ultimately lowering the cost of equity (Armstrong et al., 2010; Setiany & Suhardjanto, 2021)

2.5 Background of Compensation Disclosure Regulations

Section 14(i) of the Securities Exchange Act of 1934 ("Exchange Act"), added by Section 953(a) of the Dodd-Frank Act, mandates that the Securities and Exchange Commission ("SEC" or "Commission") issue a regulation requiring disclosure of the association between executive compensation actually paid and a registrant's financial performance in their annual proxy and information statements. This mandate is intended to provide investors and other stakeholders with more transparent, quality, clear, and comparable information about executive remuneration and corporate performance to facilitate their assessments of a public company's decision-making regarding its executive pay policies (U.S. Security and Exchange Commission, 2022).

On January 27, 2022, the Commission published for comments proposed rules that would disclose information on how companies relate executive compensation to their financial performance. The new disclosure requirements enhance transparency and comparability of information for investors regarding executive pay. In addition, the SEC argues that transparency would enable investors to make informed investment decisions and voting decisions on executive compensation.

On August 25, 2022, the Securities and Exchange Commission ("SEC") issued its final rules to offer investors transparency, clarity, and comparability about executive compensation. The new amendments require issuers to provide the following items in their annual proxy and information statements: a five-year history of pay versus performance-related metrics (a three-year reporting requirement for smaller reporting firms); various key performance metrics related

to executive remuneration, including total shareholder return (TSR)[12] TSR, net income[3], and a firm-specific measure; and two measures of the compensation actually paid to the principal executive officer (PEO)[4], and on average, to the named executive officers (NEOs)[5].

Lastly, on October 11, 2022, the final rule came into effect, requiring issuers other than emerging growth companies, registered investment companies, or foreign private issuers to comply with the new disclosure requirements in proxy and information statements, including Item 402 of Regulation S-K executive pay disclosure for fiscal years ending on or after December 16, 2022. Thus, firms with calendar years must incorporate the new disclosures in their 2023 annual proxy statements. As indicated in Table 1, I present a complete list and descriptions of key events preceding the SEC's final rules on compensation disclosures.

2.6 Theoretical Argument and Hypothesis Development Section

[1] Total shareholder return ("TSR") refers to the registrant's cumulative total shareholder return calculated based on a fixed investment of one hundred dollars as of the measurement point. Specifically, Item 201(e) of Regulation S-K provides that the cumulative TSR is calculated by dividing the sum of the cumulative amount of dividends for the measurement period, assuming dividend reinvestment, and the difference between the registrant's share price at the end and the beginning of the measurement period, by the share price at the beginning of the measurement period (SEC Final Rule, 2022).

[2]Peer group refers to a published industry or line-of-business index of peer issuers selected by the issuers with similar market capitalizations in annual reports for the past five years. The final rules allow registrants to use either the peer group required under Item 201(e) of Regulation S-K (i.e., the same index or issuers used by the company for its stock performance graph) or the peer group disclosed in the firm's CD&A (SEC Final Rule, 2022, p.117).

[3] Net income represents the net income in the company's audited financial statements in accordance with GAAP.

[4] PEO refers to the company's principal executive officer, defined in Item 402(a)(3) as the president, any vice president leading a principal business unit, division, or function (such as sales, administration, or finance), any other officer who performs a policy-making function, or any other person who performs similar policy-making functions for the issuer.

[5] NEO refers to the company's named principal executive officer for whom Item 402 of Regulation S-K executive compensation is required as (1) all individuals serving as the registrant's PEO during the last completed fiscal year, regardless of compensation level, (2) all individuals serving as the registrant's principal financial officer or acting in a similar capacity during the last completed fiscal year ("PFO"), regardless of compensation level, (3) the registrant's three most highly compensated executive officers other than the PEO and PFO who were serving as executive officers at the end of the last completed fiscal year, and (4) up to two additional individuals for whom Item 402 of Regulation S-K disclosure would have been provided but for the fact that the individual was not serving as an executive officer of the registrant at the end of the last completed fiscal year per 17 CFR 229.402(a)(3).

As the literature highlights, mandatory disclosure aims to equip shareholders with essential information to comprehend various aspects of a firm's operations, including financial position, governance communication, and executive compensation practices. Healy and Palepu (2001) emphasize the role of disclosure in enabling investors to closely monitor firm operations, assess managerial resource utilization in shareholders' interests, and address agency conflicts and information asymmetry concerns. This underscores the importance of imposing rules on managers to disclose their private dealings fully.

Information transparency has emerged as a critical governance tool, particularly in evaluating corporate governance quality and addressing information asymmetry. Studies indicate that information disclosures can stimulate market reactions and reduce information asymmetry (Healy & Palepu, 2001; Schoenfeld, 2017), although empirical evidence on investor reactions to mandatory disclosures is mixed. From the agency theory perspective, corporate disclosures are seen as pivotal in reducing agency problems and enhancing monitoring, communication, and governance, thereby reducing uncertainty in the market (Odewale & Kamrudin, 2015). These perspectives provide a basis for evaluating how shareholders might react to proposed and final disclosure rules, especially concerning executive pay policies in U.S. firms reporting to the SEC.

The significance of executive compensation and information transparency in governance discussions and debates is increasingly acknowledged. Accordingly, linking the agency theory of Jensen and Meckling (1976) to this study examining shareholders' responses to the increased compensation disclosure policies in the U.S. is imperative for understanding the role of information disclosure in corporate governance. Stock market participants may view proposed regulatory amendments as pivotal in enhancing U.S. public companies' corporate governance practices, leading to positive reactions. Therefore, this research aims to assess stock market

reactions to regulatory events preceding the adoption of final disclosure rules and expects such reactions to reflect improved corporate governance, transparency, and reduced information asymmetry (Armstrong et al., 2010).

Thapa and Brown (2004) report a substantial stock price response following President Bush's signing of the Sarbanes-Oxley Act of 2002, indicating investors' perception of the law's potential to improve corporate governance. Previous reactions to regulatory acts like the Sarbanes-Oxley Act indicate investor optimism toward enhanced future corporate governance practices. Based on this insight, I anticipate a positive reaction in abnormal returns or stock prices to regulatory events preceding the adoption of final rules. Thus, my first hypothesis is formulated as follows:

> *H1: The equity market reacts positively to news leading to mandatory executive compensation disclosure anticipated to improve corporate governance.*

Agency theory serves as a valuable framework for understanding how small firms approach information disclosure, particularly in their efforts to provide transparent and reliable information to investors. Due to their higher levels of information asymmetry and uncertainty, small firms stand to benefit significantly from disclosure practices aimed at reducing these challenges, which are likely to be positively received by market participants (McLaughlin & Safieddine, 2008). Additionally, the limited attention that small firms receive from analysts and the media further accentuates the advantages of increased disclosure for these businesses, as highlighted by Bushee and Miller (2012) and Lev (1992).

Moreover, small firms are expected to incur higher agency costs for the above reasons (Al Guindy, 2021). Lev (1992) argues that the impact of disclosures is more pronounced in relatively small and less scrutinized companies. Consequently, the recent compensation

disclosure policy by the SEC is anticipated to benefit small firms the most, as they are likely to experience a more significant positive response to such regulatory measures. In contrast, larger firms are presumed to have already implemented performance metrics related to compensation, resulting in more muted market reactions to the recent SEC's compensation disclosure policy due to their existing compliance (Brück et al., 2023; Laksmana, 2008; Packard et al., 2023). Consequently, small firms are anticipated to derive the most benefit from this regulatory requirement compared to larger firms. These observations lead to the formulation of the following hypothesis:

H2: The equity market reaction is expected to be stronger for smaller firms compared to large firms.

CHAPTER THREE: METHODOLOGY

3.1 Data Sources

To analyze equity market reactions to the events leading up to the SEC's recent compensation disclosure requirements, I extract stock return data for all publicly listed firms in the US from the Center for Research in Security Prices (CRSP) database from the Wharton Research Data Science (WRDS) database at the University of Pennsylvania. Market return, market index, and the Fama-French-Carhart four factors (market risk, book-to-market value ratio, market capitalization, and momentum) are also obtained from the WRDS database. Data extracted include daily stock returns covering January 2021 to December 2022, given that various news announcements regarding the disclosure requirements occurred in 2022.

3.2 Sample Selection

The sample used in this paper comprises all American-listed firms that must report to the Security and Exchange Commission. Extracting daily data from CRSP and Fama-French-Carhart four factors, my initial sample consists of 8,207 companies with daily returns over a seven-day event window (-3 to +3), from three days before the disclosure announcements to three days after the announcements over the two years (2021-2022). Following Bhootra (2011) and Clark and Kassimatis (2014), I exclude firms with a share price of less than $5.00. Furthermore, following the prior literature (for example, Bhootra (2011)), I include companies with securities having CRSP share codes 10 and 11 to arrive at 3,224 (See table 2).

To ensure that I have complete data available to calculate daily average abnormal returns (AR) and cumulative abnormal returns (CAR), after merging firms from the two datasets and running my statistical model, I remove firms with missing return data in the event window to end up with the final sample with complete data for 2,914 firms as presented in Table 2. Also, to test the stated hypotheses, I categorize my study sample into full and firm-size samples. The complete sample is applied to test the first hypothesis (H1) to substantiate my prediction of positive equity market reactions to the events.

To test the second hypothesis (H2) to support my prediction of stronger reactions for small firms relative to large ones, the firm samples are further categorized into small (***N***=291) and large firms (***N***=291) using deciles, where decile 10 represents large firms, and decile one (1) denotes small firms. However, defining large (small) firms by decile 10 (decile 1) appears quite restrictive, considering the sample size. As a result, I characterize large (N-874) and small firms (N=874) utilizing percentile, where the top 30% symbolizes large firms and the bottom 30% typifies small firms.

3.3 Variable Measurements

I utilize shareholder reaction to new information disclosure requirements as measured by daily abnormal returns (AR) as the dependent variable, based on the assertions that fresh information induces substantial variations in stock prices, known as abnormal returns (AR) (Beaver, 1968) and that abnormal returns reflect investors' responses to new information disclosure (Martinez-Blasco et al., 2023). Additionally, I incorporate dummy variables representing events leading up to executive remuneration disclosure (binary values of one and zero), market return, market index, market risk, book-to-market value ratio, market capitalization, and momentum as independent variables in running the SUR regression.

3.4 Methodology

3.4.1 Seemingly Unrelated Regression (SUR)

Given that the announcements giving rise to the 2022 SEC's final rule on executive compensation disclosure are calendar event dates, I apply the Zellner's Seemingly Unrelated Regression (SUR) methodology to estimate the abnormal returns (AR). The SUR method is suitable for testing a broad continuum of regulatory amendments with shared calendar day announcements for all stocks since the error term depends on all equations (Amoako-Adu and Smith (1995). This methodology reveals that the residual tends to correlate with calendar events common to all companies. The lack of the regression residuals' independence decreases the determined coefficients' efficiency, which makes the *t*-statistics unreliable if each equation is exclusively estimated since it is typically performed with the standard residual analysis. Zellner (1962) developed the SUR methodology to account for this relationship. Accordingly, the SUR approach is effective in testing for abnormal returns when the event entails a common calendar

date because of the cross-correlation of the residuals or it expressly considers the deficiency of independence of the regression residuals. Following Binder (1985), Allen and Wilhelm (1988), and Amoako-Adu and Smith (1995), I estimate the model for each firm simultaneously to determine the effect of the SEC's proposed and final regulation amendment on equity markets.

3.4.2 The Fama-French-Carhart Four-Factor Model

Abnormal return estimation models, such as the Fama-French three-factor (FF3) and the Fama-French-Carhart four-factor (FFC4[6]), are used to test regulation changes with prevalent calendar day announcements that affect all stock returns. According to Kim and Kim (2003), the four-factor model can explain the abnormal pattern of returns after earnings announcements. Also, Awwaliyah and Husodo (2018) examine the validity of the Fama-French three-factor and four-factor Carhart models utilizing U.S. data from January 1963 to December 2010. They document that Carhart's four-factor model better explains the variation of the average excess stock returns of the stock portfolio in the US than the Fama-French three-factor model.

The FFC4 model is an extension of the FF3 model due to FF3's failure better to explain the expected average returns of a firm portfolio. Thus, the FFC4 model is beneficial in testing the abnormal returns of a portfolio of stocks once the firms experience the same type of calendar date events since they help explain and capture the cross-sectional variation in average stock returns. The daily abnormal returns of the portfolio are then regressed on factors such as size, book-to-market ratio, and momentum to predict stock returns (Fama & French, 1993; Carhart, 1997) and determine if the investor reaction is statistically significant for each firm and event

[6] I chose to use the Fama-French-Carhart Four-Factor model instead of the Fama-French five-factor model for several reasons. First, the Four-Factor model is widely recognized and has been extensively validated in empirical studies, providing a robust framework for asset pricing analysis. Second, the inclusion of the profitability factor in the five-factor model can sometimes lead to multicollinearity issues or may not significantly improve the model's explanatory power in certain contexts. Third, the Four-Factor model offers a simpler and more parsimonious approach without sacrificing much in terms of explanatory capability. Considering my analysis's goals and the data's characteristics, the Four-Factor model seemed like the most appropriate choice.

date. Following Kim and Kim (2003), Gumanti et al. (2017), and Garyn-Tal & Lauterbach (2015), I regress the ensuing model to determine the daily abnormal returns of the individual firm's portfolio of assets after the pronouncements of the proposed and final SEC amendments:

$$R_{i,t} = \alpha_i + \sum_{j=1}^{3} \gamma_{i,j} D_{j,t} + \beta_1 R_{m,t} + \beta_2 SMB_t + \beta_3 HML_t + \beta_4 UMD_t + \varepsilon_{i,t} \quad (1)$$

Where $R_{i,t}$ is the stock returns for firm *i* over *t* periods. $D_{j,t}$ are binary variables equal to 1 for the j^{th} announcement date, three(3) days before and three (3) days after the publication dates, and zero (0) otherwise. The γ_{ij} coefficients measure the abnormal returns or marginal effects for each event *j* on the firm i. R_{Mt} is the market returns (CRSP value-weighted portfolio). SMB_t is the size factor, signifying the difference in returns between the rate of returns of small- and large-market capitalization stock portfolios during day *t*, HML_t is the value factor, indicating the difference in returns between high and low book-to-market stock portfolios during the day and UMD_t is the momentum factor, indicating the difference between high and low prior return stock portfolios during day *t*.

Finally, to determine the equity market reaction to the announcements of the new disclosure regulation, I utilize the Fama-McBeth (1973) approach to construct the mean abnormal returns and their associated t-statistics. Applying this method to calculate the daily mean abnormal returns, I first aggregate the estimated abnormal returns across all events and firms within each event window and estimate the mean abnormal return for each event window by averaging the coefficients obtained from the SUR regressions across event windows for the individual firms. Next, I utilize the estimated coefficients and their standard errors to calculate the t-statistics for each event's mean abnormal return. The formula for t-statistics is typically the coefficient divided by its standard error. A high t-statistic suggests that the mean abnormal return

during a specific event window is statistically significant, implying that the event significantly impacted the firm's returns beyond what would be expected based on the factors considered in the model and vice versa. This also provides valuable insights into the influence of events on stock prices or returns and their statistical significance.

CHAPTER FOUR: RESULTS

4.1 Descriptive Statistics

Table 3 presents summary statistics of key variables for my sample firms from January 2021 to December 2022 using daily data. In Panel A (Table 3), the mean (median) value of the firm size (market capitalization[7]) for the full sample is $12.56 ($1.5) billion. The mean of the firm size indicates that, on average, the market capitalization of firms in the full sample is approximately $12.56 billion. The median firm size is significantly lower than the mean. This suggests that a few very large firms may skew the mean upward. Equally, the high standard deviation of $70.03 billion indicates considerable variability in the size of firms in the sample, with values ranging widely around the mean. However, the descriptive statistics reveal a sharp contrast in the mean firm size between large and small firms. As depicted in Panel B (Panel D), large firms exhibit a substantially larger mean size of $99.26 ($39.28) billion compared to small firms in Panel C (Panel E), with a mean size of $81.95 ($219.33) million. This variation underscores the significant disparity in size within the sample firms.

Analysis of daily average returns unveils distinct patterns between large and small firms. While the full sample in Panel A shows a daily average return of 0.020%, large firms in Panel B demonstrate a higher daily average return of 0.036%. In contrast, small firms in Panel C display

[7] Firm size is measured by the market value of equity or market capitalization, which in turn is expressed as the product of stock price and the number of shares outstanding at the end of December 2022.

an even more substantial daily average return of 0.044%. These findings demonstrate differing performance trends based on firm size, with small firms showing a more robust return profile during the sample period.

Exploring the risk factors, such as market (VWRETD), size (SMB), book-to-market (HML), and momentum (UMD) factors, reveals interesting insights. The daily average returns of VWRETD, SMB, HML, and UMD factors are 0.006%, -0.017%, 0.096%, and 0.018%, respectively, as indicated in Panel A. Despite the variability in returns, all factors exhibit positive average values except for the size factor, indicating that VWRETD, HML, and UMD factors compensate for risky assets. This underscores the importance of these risk factors in driving returns and mitigating risk within the sample firms. Lastly, these risk factors' mean, median, and standard deviation values follow a similar pattern, exhibiting the average, typical values, and the extent of variability for VWRETD, SMB, HML, and UMD factors in the full sample.

As displayed in Table 3, Panel F, I examine the differences in means between large and small firms using decile 10 and decile 1 and the top 30% and bottom 30% for the key variables of interest. The t-values of 193.71 and 215.26 for deciles 10 and 1 and top 30% and bottom 30%, respectively, indicate a statistically significant difference in the mean market capitalization between the groups at the 1% level. However, the t-values of -0.42 and 0.69 correspondingly indicate no statistically significant difference in returns between the decile (10 - 1) and the top 30% and bottom 30% of firms. These results indicate significant differences in market capitalization between different groups of firms, specifically the deciles 10 and 1, and the top 30% versus the bottom 30%. However, these groups have no significant differences in returns or risk factors.

4.2 SUR Regression and Market Reaction

Table 4 reports a detailed analysis of the SUR regression outcomes, highlighting key findings regarding the stock market's response to various events. The full sample (H1) results are presented in column (I), offering insights into overall trends and patterns. In contrast, columns II and III show the results for large (decile 10) and small firm (decile 1) samples (H2), respectively, shedding light on the differences between these categories. Columns V and VI present the results for the top 30% and bottom 30% of large and small firms, respectively. The test for differences between columns II and III is reported in column IV, while column VII details the mean difference test between columns V and VI.

The findings reveal significant positive stock market reactions within the full sample across specific days. Notably, there is a positive and noteworthy response on day -2, day +2, and day +3 following the publication of comments. Similarly, the equity market displays a positive and significant reaction on day -2, day +1, and day +2 after the SEC's final regulation adoption. Furthermore, stock market participants exhibit positive and significant reactions on day +1 and day +2 following the effective date of the final amendments.

On January 27, 2022, the SEC proposed amendments to corporate disclosure rules, focusing on executive compensation disclosures by U.S. public corporations. Despite the initial adverse market reaction, the full sample exhibits a delayed yet strong positive response in subsequent days. Specifically, the daily average abnormal returns on day -2 (0.35%, t=5.91), day +2 (0.64%, t=12.04), and day +3 (0.38%, t=7.28) are statistically significant at the 1% level, indicating robust positive reactions. Interestingly, while large firms initially shows a positive and significant response on the announcement day, small firms demonstrate a negative and more significant reaction, contributing to an overall -0.22 result for the full sample. However, several

days prior to the announcement date and several days post-announcement, small firms display positive and significant market reactions, whereas large firms exhibit negative and significant responses, particularly notable when comparing decile 1 with decile 10.

The analyses comparing large and small firms reveal consistently negative results in columns IV and VII of the window across most event days. This suggests that small companies show stronger reactions compared to their larger counterparts. This phenomenon can be attributed to higher levels of information asymmetry, opaqueness, and uncertainty among small firms, rendering them riskier in the eyes of investors. Unlike large firms, small companies receive less media coverage and analyst attention, amplifying their risk profile. Consequently, increased disclosure benefits small firms, as it mitigates perceived risks. As highlighted by previous studies, investors view such disclosures as a means to lower firm risks (Bushee & Miller, 2012; Lev, 1992). Notably, the outcomes primarily driven by small firms significantly influence the overall results of the full sample, thereby supporting the hypothesis H2.

On August 25, 2022, the Commission released its final regulations to enhance executive compensation transparency, clarity, and comparability to empower investors to make well-informed investment and voting decisions regarding executive remuneration. A similar pattern of response is noted across the entire sample, with significant and positive reactions observed on specific days: day -2 (0.20%, t=3.39), day +1 (0.17%, t=3.43), and day +2 (0.29%, t=3.97). Notably, these reactions were predominantly driven by small firms across deciles 10 and 1, as well as the top 30% and bottom 30%. Surprisingly, there is a noteworthy absence of reaction from large firms, particularly those in decile 10, throughout the seven-day trading period.

However, the top 30% exhibit positive reactions, likely due to the broader nature of the sample size compared to that of decile 10. Upon conducting tests for differences between large

and small firms, negative results were observed on day -2 in columns IV and VII, with significance levels at 5% and 1%, respectively. This indicates a more heightened response from small firms compared to their larger counterparts. These outcomes suggest that large firms may have already integrated this new information or voluntarily disclosed details of compensation and performance metrics. Consequently, the overall reaction within the large firm sample appears muted in contrast to the more pronounced reactions seen among small firms.

Since several news announcements are positive and significant, I can argue that investors perceive the proposed regulatory amendments regarding corporate disclosure on executive compensation as value-enhancing. This perception stems from the expectation that improved compensation disclosure will bolster corporate governance by fostering greater alignment between the interests of corporate managers and shareholders. Consequently, this alignment is expected to mitigate risks and uncertainty while reducing other agency costs, as noted in studies by Healy and Palepu (2001) and Setiany and Suhardjanto (2021). These findings strongly support hypothesis H1.

Furthermore, I analyze daily cumulative abnormal returns (CAR) across various event windows for both the full sample and the samples for firm classifications. These windows included seven-day (-3 to +3), five-day (-2 to +2), and three-day (-1 to +1) periods, with detailed results presented in Table 5. This analysis intends to provide a comprehensive understanding of how market reactions evolved over different time frames following the announcement of the SEC's final rules on executive compensation transparency. On January 27, 2022, the SEC published for comments the proposed modifications to the regulations governing executive remuneration disclosure, culminating in issuing the final rules in 2022. The daily average CAR related to this announcement event exhibits a positive and statistically significant response for

the full sample over the five-day event window-1CAR22 (0.68%, t=6.09) and the seven-day event window-1CAR33 (1.40%, t=8.33) at the 1% level, as detailed in Panel A (column I). Notably, this trend is propelled by the small firm sample, showing CAR values of (2.98%, t=6.13) and (6.32%, t=9.55) for the corresponding event windows in Panel A (column III). A similar pattern is evident for the bottom 30% in Panel E (II). Conversely, a negative reaction or no discernible response is observed for the large firm sample across all event windows in the Panels with respective columns.

The test for the difference in daily average CAR for large and small firm groupings reveals a significantly negative difference at the 1% level in Panel A (column IV) and Panel B (column III). This suggests that the market reaction to the proposed disclosure amendments is more pronounced for small firms compared to large ones. The CARs, both statistically and economically significant for the full sample, indicate a robust reaction from the overall market. This underscores that small firms are the primary drivers of the full sample results, attributed to heightened information asymmetry leading to increased uncertainty and risk in these firms, which strongly supports H2. Consequently, these small firms stand to gain the most from the recent compensation disclosure requirements by the SEC, as investors may perceive the disclosed information to mitigate risk, thus representing positive news.

The announcement of the final regulation on August 25, 2022, reflects the patterns seen in the daily average abnormal returns detailed in Table 4. Specifically, the daily mean CAR for the full sample demonstrates a significantly positive trend over the five-day event window-2CAR22 (0.49%, t=3.61) and seven-day window-2CAR33 (0.377%, t=2.43) in Panel A (column I) at 1% and 5%, respectively. Notably, this positive movement was primarily influenced by small firms compared to their larger counterparts. In a breakdown by firm grouping, the CAR for

the small firm sample in Panel A (column III) shows consistent positivity across all event windows, with significant levels observed for the five-day and seven-day windows at the 5% and 10% levels, respectively. Conversely, the large firm's daily average CAR displayed a negative and insignificant trend in Panel A (column II) but turned positive and significant in Panel B (column I). Despite this, the test for the difference in CAR between large and small firms was negative in Panel A (column IV) and Panel B (column III) for the 5-day window at the 1% and 5% levels, respectively, indicating a notable distinction in CAR between these firm sizes during periods of value-relevant disclosures.

4.3 Discussions

My empirical analysis demonstrates notable differences in stock market reactions across various sample events. The findings indicate positive and significant reactions for the full sample and small firms, while large firms exhibit either negative or no response. These positive reactions suggest increased transparency in compensation disclosure can bolster shareholder value. From an agency theory perspective, mandatory disclosure to the public appears to reduce agency costs by addressing information asymmetry and uncertainty, thereby reducing firm risks, aligning managerial and shareholder interests, and decreasing overall agency costs (Healy & Palepu, 2001; Setiany & Suhardjanto, 2021), ultimately fortifying governance in American public companies.

Furthermore, the study developed two hypotheses to assess equity market reactions, employing a comprehensive set of dummy variables to test them. The first hypothesis (H1) regarding the full sample shows a positive and significant stock market reaction to news surrounding mandatory executive compensation disclosure, anticipated to improve corporate governance. This aligns with previous research indicating that equity investors generally respond

positively to new information that enhances compensation disclosure transparency, reduces information asymmetry, and improves corporate governance (Gunawan & Lina, 2015; Hermalin & Weisbach, 2012; Pruthi & Koul, 2019), potentially leading to lower equity costs.

Similarly, the second hypothesis (H2) examines whether small firms exhibit a more robust market reaction than large firms. The results support this hypothesis, with small firms demonstrating significantly positive and stronger reactions. This is consistent with literature suggesting that small firms benefit more from disclosure practices that reduce information risks and uncertainty due to higher information asymmetry and lower media and analyst coverage (Bushee & Miller, 2012; McLaughlin & Safieddine, 2008). Large firms, on the other hand, show non-reactions, indicating they may have already incorporated this information, resulting in muted market responses. The reaction on January 27, 2022, is particularly noteworthy, with large firms showing a significantly positive response while small firms exhibit a negative and more substantial reaction, driving the overall results. This adverse reaction in small firms could stem from perceived compliance costs, potentially leading shareholders to react negatively.

CHAPTER FIVE: CONCLUSION

This research empirically explores the stock market reactions to various announcements leading up to the 2022 SEC's final rules aimed at enhancing corporate disclosure regarding executive compensation, intending to augment shareholder value among American-listed firms subject to these regulations. A final sample of 2,914 listed companies from 2021 to 2022 is selected, followed by developing two hypotheses. Empirical testing of these hypotheses at the firm level reveals that the announcement events positively and significantly impact shareholder wealth. This positive market reaction underscores the notion that increased transparency regarding CEO compensation substantially enhances the overall corporate governance practices

of U.S. public firms, aligning with the agency theory's premise regarding the link between information disclosure and corporate governance within the context of executive remuneration (Alves et al., 2012; Goh et al., 2020).

Furthermore, the positive Cumulative Abnormal Returns (CARs) observed for the small firm sample are notably more substantial than those for the large firm sample and serve as the primary driver behind the study's overarching findings. By analyzing a sample of American companies, this study provides evidence that small firms experience more robust reactions due to their heightened information asymmetry, increased uncertainty (risks), other associated agency costs, and reduced media and analyst coverage (Lev, 1992). Consequently, such disclosures enable investors to view small firms more favorably, as the newfound transparency aids in assessing these firms' future risk or uncertainty based on the available information (Liu et al., 2023). Conversely, the CARs for the large firm samples are negative and statistically insignificant compared to those of small companies.

Moreover, the implications of this study extend significantly to corporate managers, investors, and regulatory bodies due to their pivotal roles in reducing information uncertainty through enhanced corporate disclosure and transparency practices. The findings underscore the importance of corporate managers' proactiveness in establishing robust information disclosure policies to boost transparency, thereby mitigating agency costs (Healy & Palepu, 2001; Pruthi & Koul, 2019). This study also offers valuable insights for investors, urging them to consider the adverse effects of information uncertainty attentively in their investment decision-making processes. Consequently, shareholders may advocate for more transparent disclosures from management, aiding in informed and rational investment decisions and holding corporate managers accountable for fraudulent activities. Finally, regulatory bodies such as the SEC play a

crucial role in safeguarding investors' interests and guiding U.S. public firms by issuing comprehensive guidelines for appropriate corporate disclosure practices in annual financial reports and enforcing stringent compliance measures.

5.1 Limitations and Future Research

This study has several limitations that readers should consider when interpreting the results. Firstly, the analysis of shareholders' reactions to the SEC's recent executive pay disclosure is restricted to publicly listed firms in the U.S. Consequently, the findings may not be broadly applicable to private corporations, as they typically do not disclose annual reports (Brück et al., 2018). Additionally, the study's timeframe is limited to two years (2021 to 2022) due to data availability constraints, which may restrict the generalizability of the results to other periods. Therefore, future research on equity market reactions to events leading up to the SEC's final compensation disclosure requirements could extend the study period to five or ten years to enhance the results' generalizability. Furthermore, this paper focuses on transparent disclosure of executive compensation to benefit investors. This study paves the way for future researchers to explore the quality and effectiveness of corporate disclosure regarding executive compensation details, aiming to provide more excellent value to shareholders.

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Appendix

Table 1

Key events leading to changes in the SEC compensation disclosure requirements.

Events	Date	Description
1.	January 27, 2022	The Securities and Exchange Commission ("SEC") published for comments its proposed amendments considered in April 2015 over a 30-day period following the publication of the release in the Federal Register, requiring disclosure about executive compensation paid by a firm and its financial performance (Section 953(a) of the Dodd-Frank Act of 2010).
2.	August 25, 2022	The SEC issued its final rules to offer investors transparency, clarity, and comparability about executive compensation. This allows investors to assess executive pay packages when voting for fiscal years ending on or after December 16, 2022.
3.	October 11, 2022	The final rule came into effect, requiring registrants to comply with the new disclosure requirements in their annual proxy and information statements, executive compensation disclosure for fiscal years ending on or after December 16, 2022, under Item 402 of Regulation S-K.

Table 2

Sample Breakdown

Description	Total
An initial sample of firms from the CRSP database	8,207
Less: Firms with share values < $5.00 and securities that are not share codes (10 & 11)	4,983
	3,224
Less: Due to missing return data in the event window	310
Number of firms in the final sample	**2,914**

Note: In this study, I focus on the American-listed firms that must report to the SEC. I start with 8,207 firms from January 2021 to December 2022. Following Clark and Kassimatis (2014), I eliminate any penny stock firms in the period with a stock value < $5.00, and following Bhootra (2011), I exclude securities that are not share codes 10 & 11 to obtain 3,224 firms. Lastly, after running my statistical model, firms with missing return data in the event window are removed to attain the final sample with complete data for 2,914 firms for my analysis for the sample period.

Table 3

Descriptive Statistics

Panel A - Full Sample

	# of Obs.	Mean	Median	Standard Dev
Market Cap (firm size) (million)	1,549,622	12,563.81	1,497.15	70,033.40
Returns	1,549,622	0.020%	0.000%	4.668%
Market Returns	504	0.006%	0.014%	1.235%
SMB	504	-0.017%	-0.040%	0.771%
HML	504	0.096%	0.100%	1.183%
UMD	504	0.018%	0.080%	1.268%

Panel B-Decile 10- Large Firms

	# of Obs.	Mean	Median	Standard Dev
Market Cap (firm size) (million)	154,815	99,264.33	43,213.84	201,460.53
Returns	154,815	0.036%	0.035%	4.835%

Panel C - Decile 1 - Small Firms

	# of Obs.	Mean	Median	Standard Dev
Market Cap (firm size) (million)	155,186	81.95	80.74	34.09
Returns	155,186	0.044%	-0.001%	6.112%

Panel D - Top 30%-Large Firms

	# of Obs.	Mean	Median	Standard Dev
Market Cap (firm size) (million)	465,161	39,280.92	12,270.54	123,759.75
Returns	465,161	0.021%	0.016%	3.843%

Panel E - Botton 30% - Small Firms

	# of Obs.	Mean	Median	Standard Dev
Market Cap (firm size) (million)	464,787	219.33	199.39	129.49
Returns	464,787	0.014%	0.000%	5.318%

Panel F - Test of Mean Difference

	Decile 10 - 1	**Top 30% - Bottom 30%**
	t_value	t_value
Market Cap (firm size)	193.71***	215.26***
Returns	-0.42	0.69

Note: Table 3 reports the summary statistics (means, medians, and standard deviations) of the key variables for my sample firms from January 2021 to December 2022 utilizing daily data for the full sample (Panel A), large firm-decile 10 (Panel B), and small firm sample-decile 1 (Panel C). I also report descriptive statistics for the Top 30% (Bottom 30%) representing large (Panel D) (small firms) (Panel E). The t-test is used to test the differences in means between the large firm (decile 10) and the small firm (decile 1) and between the large firm (Top 30%) and small firm (Bottom 30%) in Panel F. *** denote the two-tailed statistical significance at the 1% levels.

Table 4

The Market Reaction to Events Leading to the SEC's Final Disclosure Requirements Amendments.

		I		II		III		IV	V		VI		VII
		Full sample		Large Firms (Decile 10)		Small Firms (Decile 1)		Diff Test (II-III)	Large Firms (Top 30%)		Small Firms (Bottom 30%)		Diff Test (V-VII)
Events	Variable	Est.	t-stat	Est.	t-stat	Est.	t-stat		Est.	t-stat	Est.	t-stat	
	Event day -3	-0.0019	-2.88***	0.0012	0.84	-0.0278	-9.51***	8.97***	0.0034	3.62***	-0.0130	-8.25**	8.94***
	Event day -2	0.0035	5.91***	-0.0034	-3.35***	0.0207	8.83***	-9.44***	-0.0035	-5.04***	0.0125	9.77**	-10.99***
	Event day -1	-0.0006	-1.19	-0.0029	-2.51**	0.0040	1.89*	-2.87***	-0.0010	-1.49	0.0020	1.86*	-2.37**
1. 1- 27-22	Event day 0	-0.0022	-4.12***	0.0029	2.32**	-0.0075	-3.24***	3.95***	0.0015	1.75*	-0.0054	-4.61***	4.77***
	Event day +1	-0.0002	-0.45	-0.0021	-1.71*	-0.0028	-1.28	0.30	-0.0010	-1.32	-0.0014	-1.25	0.26
	Event day +2	0.0064	12.04***	0.0007	0.77	0.0153	6.20***	-5.61***	0.0018	3.24***	0.0140	10.96***	-8.76***
	Event day +3	0.0038	7.28***	-0.0004	-0.43	0.0129	5.38***	-5.14***	0.0018	2.90***	0.0085	6.88***	-4.79***
	Event day -3	-0.0004	-0.73	-0.0002	-0.29	0.0016	0.55	-0.60	-0.0002	-0.33	0.0003	0.23	-0.34
	Event day -2	0.0020	3.39***	-0.0026	-2.43**	0.0062	1.80*	-2.45**	0.0002	0.31	0.0045	3.11***	-2.76***
	Event day -1	-0.0008	-1.68	0.0006	0.58	-0.0003	-0.13	0.35	0.0005	0.78	-0.0007	-0.58	0.87
2. 8-25-22	Event day 0	-0.0009	-1.58	-0.0005	-0.38	0.0001	0.03	-0.15	-0.0003	-0.51	-0.0020	-1.29	0.99
	Event day +1	0.0017	3.43***	-0.0010	-0.99	0.0045	1.71*	-1.95*	0.0017	2.74***	0.0032	2.63***	-1.07
	Event day +2	0.0029	3.97***	0.0008	1.28	0.0064	2.28**	-1.96**	0.0015	3.55***	0.0053	2.35***	-1.64
	Event day +3	-0.0007	-1.44	0.0012	1.39	-0.0024	-1.04	1.45	0.0016	3.16***	-0.0030	-2.55**	3.58***
	Event day -3	-0.0014	-2.44**	-0.0016	-1.55	0.0052	1.75*	-2.16**	-0.0014	-2.26**	-0.0005	-0.34	-0.62
	Event day -2	0.0001	0.26	0.0007	0.63	-0.0076	-2.58***	2.64***	0.0023	3.73***	-0.0038	-2.96***	4.30***
	Event day -1	-0.0005	-0.87	-0.0001	-0.07	-0.0033	-0.98	0.91	-0.0005	-0.67	-0.0017	-1.09	0.68
3. 10-11-22	Event day 0	-0.0018	-2.72***	-0.0022	-1.91*	-0.0086	-1.93*	1.38	-0.0006	-0.90	-0.0054	-2.88***	2.38**
	Event day +1	-0.0007	-1.26	-0.0018	-1.82*	0.0041	1.44	-1.96**	-0.0016	-2.42**	0.0014	1.06	-2.01**
	Event day +2	0.0013	2.11**	-0.0019	-1.80*	0.0019	0.73	-1.34	-0.0031	-4.47***	0.0046	3.47***	-5.14***
	Event day +3	0.0031	5.32***	-0.0009	-0.73	0.0068	2.16**	-2.28**	0.0007	0.94	0.0059	4.00***	-3.14***
Observs		2,914		291		291			874		874		

Note: Table 4 reports the stock market reaction to events leading to the SEC's final disclosure amendments. Column I reports the estimates from the SUR regression for the full (H1) and firm samples (H2) using daily returns over seven-day, five-day, and three-day event windows (-3 to +3, -2 to +2, and -1 to +1); three days, two days, and one day before and three days, two days, and one day after the disclosure announcements over the two years (2021 – 2022). Columns II and III report results for the large (decile 10) and small (decile 1) firm samples, respectively. Similarly, columns V and VI present outcomes for the large Top 30%) and small (Bottom 30%) firm groups in that order. The *t*-test for the difference between the large firm (decile 10) and small firm (decile 1) groups is reported in column IV, and the *t*-test for the difference in means for the large (Top 30%) and small (Bottom 30%) firm samples are presented in column VII. The investors' response to firm announcements or information disclosure is measured by the daily average abnormal or cumulative abnormal returns as the dependent variable. ***, **, & * indicate the two-tailed statistical significance at the 1%, 5%, and 10% levels respectively.

Table 5

Cumulative Abnormal Returns - CAR (-3 to +3, -2 to +2, and -1 to +1) for Events leading to Changes in the SEC Disclosure Requirements.

Panel A - Definition of Firms by the Deciles 10 and 1

		I		**II**		**III**		**IV**
		Full sample		Large Firms (Decile 10)		Small Firms (Decile 1)		Test for Diff (II-III)
Events	Variables	CAR	t-stat	**CAR**	t-stat	CAR	t-stat	
	1CAR11	-0.0030	-3.46***	-0.0021	-1.02	-0.0063	-1.68*	0.97
1. January 27, 2022	1CAR22	0.0068	6.09***	-0.0049	-2.07**	0.0298	6.13***	-6.42***
	1CAR33	0.0140	8.33***	-0.0087	-2.67***	0.0632	9.55***	-9.78***
	2CAR11	-0.0001	-0.08	-0.0010	-0.50	0.0043	0.90	-1.02
2. August 25, 2022	2CAR22	0.0049	3.61***	-0.0028	-1.18	0.0169	2.41**	-2.66***
	2CAR33	0.0038	2.43**	-0.0019	-0.59	0.0161	1.95*	-2.04**
	3CAR11	-0.0001	-0.08	-0.0010	-0.50	0.0043	0.90	-1.02
3. October 11, 2022	3CAR22	-0.0017	-1.23	-0.0053	-2.21**	-0.0134	-1.79*	1.03
	3CAR33	0.0000	0.01	-0.0079	-2.55**	-0.0013	-0.15	-0.70
Observations		2,914		291		291		

Note: Table 5 reports the CAR for events leading to amendments to the SEC disclosure requirements. Column I reports the CAR estimates for the full sample over a seven-day, five-day, and three-day event window (-3 to +3, -2 to +2, and -1 to +1). Columns II and III report outcomes for the large (decile 10) and small (decile 1) firm samples, respectively. The t-test for the difference between the small firm and large firm groupings is presented in column IV. ***, **, &* represent the two-tailed statistical significance at the 1%, 5%, and 10% levels respectively.

Panel B - Definition of Firms by Top 30% versus Bottom 30%

		I		II		III
		Large Firms (Top-30%)		Small Firms (Bottom-30%)		Test for Diff (I-II)
Events	Variables	CAR	t-stat	CAR	t-stat	
	1CAR11	-0.0006	-0.44	-0.0048	-2.47**	2.31**
1. January 27, 2022	1CAR22	-0.0023	-1.53	0.0217	8.78***	-8.31***
	1CAR33	-0.0039	-1.78*	0.0426	11.82***	-11.02***
	2CAR11	0.0019	1.66*	0.0005	0.24	0.55
2. August 25, 2022	2CAR22	0.0036	2.53***	0.0103	2.90***	-1.75**
	2CAR33	0.0050	2.97***	0.0076	1.89*	-0.60
	3CAR11	0.0019	1.66*	0.0005	0.24	0.55
3. October 11, 2022	3CAR22	-0.0035	-2.37**	-0.0049	-1.41	0.36
	3CAR33	-0.0042	-2.40**	0.0006	0.15	-1.08
Observations		874		874		

Note: Table 5 Panel reports the CAR for events leading to amendments to the SEC disclosure requirements. Column I reports the CAR estimates for the full sample over a seven-day, five-day, and three-day event window (-3 to +3, -2 to +2, and -1 to +1). Columns II and III present results for the large (Top 30%) and small (Bottom 30%) firm samples, respectively. The t-test for the difference between the small firm and large firm categories is presented in column IV. ***, **, &* represent the two-tailed statistical significance at the 1%, 5%, and 10% levels respectively.