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Association of Insider Trading Patterns with Earnings Management Citations from 2002-2012

Anne-Mary Emuobonuvie Nash-Haruna
Walden University

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Walden University

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Anne-Mary Nash-Haruna

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Walden University
2018

Abstract

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2012

by

Anne-Mary Nash-Haruna

MSAC, Strayer University, 2007

BS, Delta State University Abraka Nigeria, 1997

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Management

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November 2018

Abstract

Insider trading and earnings management (EM) have traditionally been associated with fraud and corporate scandals. Corporations involved in fraudulent financial reporting or earnings manipulations were assumed to have used insider trading patterns to manipulate earnings, thereby concealing information from investors. The purpose of this quantitative, non-experimental study was to examine the association between insider trading patterns and EM citations among a randomly selected sample of publicly traded companies. The research question pertained to the association between the number of EM citations and whether a firm exhibited patterns of insider trading among publicly traded firms. The theoretical framework was based on accounting, auditing and financial theories. Archival data were collected in the form of financial statements from annual reports of 77 companies submitted to the Securities and Exchange Commission. A multiple linear regression was used to answer the research question to determine whether there was an association between insider trading patterns and EM. Results of descriptive statistics and regression analysis revealed that, after controlling for the firm size, a significant association existed between the number of EM citations and patterns of insider trading in the sample of publicly traded firms. A positive relationship, wherein firms with patterns of insider trading had more EM citations as indicated from the regression results. These findings may encourage investors, regulators, auditors, the public, and other interested parties to work with researchers to foster confidence in financial markets and the accounting profession, and to redeem the mistakes made by companies in the past.

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Dedication

I want to use this medium to dedicate this dissertation first to God, my Lord and Savior Jesus Christ. But for him, I will not be where I am today. He is the sole purpose and reason for my being, and without him, his wisdom, help, and guidance I would never have been able to make it through life and school. God has been awesome and have taken me and my kids through some turbulent times in our lives and have guided my part since then as I move through life and today, I am dedicating this degree of doctorate in Management with specialization in Finance to him because I am not sure I will be anywhere without him. John 3:16 states, “For God so loved the world that He gave His only begotten Son, that whosoever believeth in Him should not perish but have everlasting life.” It is through my faith in Christ that I have been able to trouble shoot to this point and been able to succeed in reaching the point of completion in my educational career.

The next set of people I want to dedicate this dissertation to are my wonderful and beautiful children Emoshioke, Oshiogwe, and Oshione Nash-Haruna. My three wonderful kids have been an inspiration in my life to say the least. My children where the driving force behind why I did not give up as I wanted to give up so many times in this journey, but they kept me going and also reminded me of my own words of “we do not quit what we start,” allowing me to continue my education even when it seemed impossible to complete the degree. Without their unwavering love and understanding, loving support, and effort I would never have succeeded in becoming a PhD. I love you all to the moon

and back. I could never have succeeded in obtaining my doctoral degree, much less completing this dissertation today without the three of you by my side.

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Chapter 1: Introduction to the Study

Introduction

The corporate accounting scandals that occurred in the early 2000s brought down leading firms like Enron, HealthSouth, Tyco, and WorldCom and caused a lack of faith of investors to make decisions on how to invest their funds. It was also indicated that different financial and accounting issues followed these notable scandals such as bankruptcy filings, which brought financial-reporting practice under scrutiny. The resulting concerns from investors regarding financial issues is a commonly referenced course of collapse or decline in the securities market. This follows as financial misconduct and is associated with large stock price decline, SEC inquiry, top executive change or turnover, insider trading, and bankruptcy filings (Agrawal & Cooper, 2015). Therefore, in 2002, the U.S. Congress enacted the Sarbanes-Oxley (SOX) Act in response to the financial crisis in financial reporting. The focus of the SOX Act is to improve the quality of financial reporting, improve corporate social responsibility, invoke corporate governance, and to restore investor confidence in decisions regarding how they diversify their funds when investing.

Earnings management (EM) is a recognized key to measuring corporate performance. Generally Accepted Accounting Principles (GAAP) permits managers certain accounting discretions when completing financial reports. Thus, corporate executives have taken advantage of this leverage to manage earnings aggressively either by accrual accounting or real accounting, such as cost allocation, transfer pricing, or

capital budgeting in preparing financial reports at the discretion of management (Christie & Zimmerman, 1994). Prior research has shown that the motives behind these practices often include strengthening the quality of financial reporting based on information asymmetry or linking it to insider trading customs or practices (Agrawal & Cooper, 2015; Ahearne, Boichuk, Chapman, & Steenburgh, 2016; Alldredge & Cicero, 2015; Godsell, Welker, & Zhang, 2017; Goel & Goel, 2017; Olsen & Zaman, 2013; Sawicki & Shrestha, 2014; Tartaroglu & Imhof, 2017).

When it comes to EM, information is important and the method used to disseminate information is crucial to the investor. This also requires paying more attention to the stock market, which can lead to better decision-making among investors. Corporate insider trades predict abnormal future returns based on inside information, which corporate insiders are privy to before the public, thereby disregarding the legal prohibitions on using inside information to make trading decisions. If stock prices reflect all publicly available information, some profitable inside stock selling could also be related to public information (Alldredge & Cicero, 2014). Because EM can be used with insider trading, it is important to examine the association between the two. Therefore, I conducted this study to examine whether there is an association between insider trading patterns and EM citations for a randomly selected sample of publicly traded companies.

Background of the Study

Fraudulent financial reporting and corporate fraud have been linked to a lack of proper corporate governance (Hossain, Mitra, Rezaee, & Sarath, 2011). EM,

compensation structures for managers, and stock option backdating practices have also contributed to the problem, which is tied to the influence of board members and audit committees (Hossain et al., 2011). EM has been frequently included in accounting literature (Sawicki & Shrestha, 2014); however, a limited number of researchers have examined the incentives associated with EM regarding insider trading patterns. But there is a significant connection between insider trading patterns and EM (Beneish & Vargus, 2002). For example, Sawicki and Shrestha (2014) documented the opportunistic EM patterns attributed, in part, to incentives associated with insider trading. Comparatively, Piotroski and Roulstone (2005) concluded that managers cash out after disclosing robust earnings news. Because of previous researchers' findings on EM, in this study I examined the influence that insider trading has on EM.

Corporations manage their earnings in ways that lead to misrepresentation in the firms' financial reports, which can lead to submitting fraudulent financial reports (and subsequently corporate fraud) based on fabrication of earnings through either accrual management, real activities management, or buyback of stock options (Gunny, 2010). This led to the passage of the SOX Act of 2002, though some have argued that corporations face challenges with the law with respect to the cost involved in compliance, particularly with SOX 404, which regards internal control (Shaw & Terando, 2014). On the contrary, empirical evidence has shown that since the SOX Act was enacted, auditors have discounted their initial year audit fees, which was the practice before the SOX Act (Desir, Casterella, & Kokina, 2014). Disclosure of financial reports and the reaction from

the market with respect to public earnings announcements have dominated the research in accounting economics and finance (Sawicki & Shrestha, 2014). Many studies show the importance of disclosure, especially in regard to timing and quality of financial information, and EM is at the center of this problem (Sawicki & Shrestha, 2014). Prior research shows various incentives for EM, including those that arise from management ownership, as well as an establishment of an implicit link between insider selling and income-increasing EM (Sawicki & Shrestha, 2014). However, there is a lack of empirical studies on the effect of the SOX Act on the prevention of insider trading as it relates to EM.

Some studies have addressed motives that drive managerial equity ownership while creating the avenue for EM (Ali, 2017; Dargenidou, Tonks, & Tsofigkas, 2017; Gao, Gao, & Wang, 2017; Janney & Gove, 2017; Li, Nekrasov, & Teoh, 2017). For example, Chen, Lee, and Chou (2015) noted the link to future management selling based on optimization of equity-based compensation using different methods to integrate firms' unmanaged performance, discretionary accounting choices, and consensus earnings forecasts, which can create a motivation to manage earnings. These prior research studies have addressed these questions on an individual basis (Agrawal & Cooper, 2015). However, researchers had yet to be conducted on the relationship between insider trading patterns as they relate to corporate performance and EM.

Problem Statement

Corporate accounting scandals have affected companies such as Enron and WorldCom, which put financial-reporting practices under scrutiny. In these scandals, Enron had a net loss of \$618 million, and WorldCom disguised a loss of \$662 million as a profit of \$2.4 billion (Brickey, 2003). This general problem of fraud in corporate accounting manifesting as excessive EM has become more widespread (Lin & Wu, 2015). The specific problem was that the association between insider trading patterns and EM citations among publicly traded companies was not well understood.

Purpose of the Study

The purpose of this quantitative, non-experimental study was to examine the association between insider trading patterns and EM citations for a randomly selected sample of publicly traded companies. I analyzed insider trading patterns and EM through accrual-based and real activities EM with year-end financial reports, stock options, proxies, and other filings of selected companies. I used these data sources to determine what association exists between insider trading patterns and EM citation between 2002 and 2012.

Through this quantitative research study, I examined insider trading patterns and EM citations after the SOX Act of 2002 until 2012. The categorical independent variable was insider trading patterns. The continuous dependent variable was number of EM citations. I included firm size as a covariate. I focused on a sample of randomly selected publicly trading companies listed in the New York Stock Exchange (NYSE), and used

archival data from the Securities and Exchange Commission (SEC), Compustat, Institutional Brokers Estimates System, CDA Spectrum database, Execucomp database, and the NYSE.

Research Question and Hypotheses

Research Question 1: What association exists between number of earnings management citations and patterns of insider trading in publicly trading firms, controlling for firm size?

H₀: There is no significant association between number of earnings management citation and patterns of insider trading in the publicly trading firms after controlling for firm size.

H_a: There is a significant association between number of earnings management citation and patterns of insider trading in the publicly traded firms after controlling for firm size.

I used a quantitative, non-experimental correlational study approach to answer the research question. Archival data comprised the continuous variable of number of EM citations, the categorical variable of patterns of insider trading, and the categorical variable of firm size. I performed a multiple linear regression to evaluate the association between the study variables, using the following regression equation:

$$y = a + b_1x_1 + b_2x_2 + e$$

Where y = the dependent variable of number of earning management citations, a = the intercept, x₁ = the independent variable of insider trading patterns, x₂ = the covariate of

firm size, b_1 = the regression coefficient estimate for x_1 , b_2 = the regression coefficient estimate for x_2 , and e = the error term. This research question was designed to address the problems of financial crisis and fraudulent financial reporting that led to the SOX Act of 2002. The findings of this study may help change, create, or revise reporting requirements for organizations.

Theoretical Foundation

The theoretical framework for this study was based on the accounting and auditing theories of Arens, Elder, and Beasley (2014), Glover, Messier, and Prawitt (2014), Fruhan (1979), and Haugen (2001), as well as financial theories of portfolio performance. These theories address the nature of EM, corporate finance, risks and returns investments, cost of capital, auditing, and assurance services with respect to firms' management of their earnings through investments and fees charged during audit engagements. These theories also address the nature of how investors value investment portfolios and the governance needed to sustain the firm. Finally, the authors of the theories have commented on EM, financial reporting, corporate fraud, auditing standards, audit fees, auditor independence, audit representation, audit committee, Public Company Accounting Oversight Board, corporate governance, and SOX; therefore, these theories were applicable to the topic under study.

In addition to the various auditing theories, Gunny's (2010) research on wealth creation, financial risk, securities valuation, and financial decision processes provided a foundation for the understanding of EM and the expectation of the management within

these firms regarding risky or potentially harmful investments. This method could also facilitate implementing financial strategies that would provide diversification of portfolios, corporate governance, risk management and assessment, and how to curtail any misrepresentation on the part of the audit firm and the firm it is representing.

Finally, I built on past research studies that have been conducted to investigate what was previously common practice before the enactment of the SOX Act in 2002 (Hossain et al., 2011). After Congress passed the law, it changed the way companies did business and how they managed the firm's earnings. My study also built on past research on corporate fraud and its effects after the SOX Act (2000-2012) on publicly traded companies to determine whether there is an effect on insider trading patterns to boost EM. In this study, I considered the nature of EM, insider trading, corporate governance, corporate social responsibility, audit fees, auditor independence, financial reporting, and how the public as well as investors value the information that they get. This framework was supplemented using research by Carter (2013), Chen and Huang (2013), and Desir et al. (2014). The study consisted of an examination of areas of EM, corporate fraud, corporate governance, SOX, audit fees, auditor independence, audit committee, corporate social responsibility audit policies, and financial reporting and accounting scandals from 2000-2012.

Nature of the Study

I followed a quantitative methodology with a non-experimental, correlational design to evaluate the association between EM citations and insider trading patterns from

2002-2012 in a randomly selected sample of publicly trading companies listed in the NYSE. In this approach, researchers use numerically measurable variables to make statistically backed inferences about a population or a relationship (Field, 2013). This was an appropriate approach, as I sought to use archival data rather than interpret narratives gained through an in-depth qualitative interview process (see Almalki, 2016). As I sought to assess an existing relationship without the manipulation of any variables, the non-experimental, correlational design was also appropriate (see Field, 2013). The variables of interest in this study were the continuous variable of number of EM citations and the categorical variable of insider trading patterns. A covariate of firm size was added to the model. These variables were composed of archival data obtained from SEC, Compustat, Institutional Brokers Estimates System CDA Spectrum database, Execucomp database, and the NYSE. I evaluated the association between EM citation and insider trading patterns from (2002-2012) in a randomly selected sample of publicly trading companies listed in the NYSE using a multiple linear regression.

Definitions

EM can be considered beneficial to investors or executives. From a stock-based compensation incentive, which can also be linked to insider trading patterns, given the amount of risk inherent with stock-based compensation motives, management of earnings is driven by managers with the sole purpose of obtaining some personal gain at the detriment of shareholders (Schipper, 1989). Thus, the relationship between stock-based compensation motives and EM becomes a significant problem for modern corporate

governance. Schipper (1989) was the first person to add real earnings management (REM) in the meaning of EM, defining it as a resolute behavior or intervention in the external reporting process with the goal of personal profit, which also involves accruals-based earnings management (AEM) and REM, achieved by investment timing or financing decision that can alter earnings reported or a subset of it.

Definitions of Terms

Accruals Earnings Management (AEM): In the realm of GAAP choices that try to “obscure” or “mask” the true economic performance of a firm (Dechow & Skinner, 2000).

Compensation structure: A process that provides a corporation the framework for organizing and managing employees’ base salaries. A salary range in the pay structure typically encompasses a grouping of jobs (e.g., position in the firm, jobs with similar job responsibilities and levels, employee skill sets and strategic importance to the organization). The pay levels associated with the salary ranges (i.e., minimum, midpoint and maximums) are developed based upon the organization’s overall compensation strategy and pay positioning (Bhat & Sveinsdottir, 2016; Devers & Sanders, 2016; Humphery-Jenner, Lisic, Nanda, & Silveri, 2016; Pham, 2017; Woo, 2017).

Corporate governance: The way a firm manages and observes proper answerability for managerial and financial performance (Rezaee, 2004).

Corporate social responsibility: The commitment that the management of organization makes to improve the activities of the firm that have implications for

economic, societal, and environmental concerns on multiple geographic levels (Harjoto & Jo, 2015).

Earnings announcements: An official public statement of a corporation's profitability for a specific time, typically a quarter or a year. An earnings announcement occurs on a specific date during earnings season and is preceded by earnings estimates issued by equity analysts. When the company has been profitable leading up to the announcement, their share price will usually increase after the information is released (Chung, Kim, Lim, & Yang, 2016; Li, Nekrasov, & Teoh, 2017; Savor & Wilson, 2016).

Earnings management (EM): A process that happens when managers make decisions on their own with respect to what financial numbers to include on the firm's financial reports to manage or influence the corporation's financial performance (Watts & Zimmerman, 1990). In this study, I measured EM by the number of quarters ranging from 2002-2012.

Fraudulent financial reporting: When a firm is being "creative" or "cooking the books" or even padding financial information (Kotsiantis et al., 2006), intentionally misstating financial statements or disclosure in a material way as well as the perpetration of an illegal act that has a direct effect on the financial statements or disclosures (Beasley et al., 1999). Fraudulent accounting involves accounting choices that violate GAAP.

Information asymmetry: The failure of a transaction by two parties not displaying or making know the same relevant information (Chae, 2005).

Insider trading: Perceived as illegal and generally refers to the purchase or trading a security in violation of a fiduciary duty or other association of trust and credence while in control of material and nonpublic information about the security. Insider trading breach can also include “tipping” such information, securities trading by the person “tipped,” and securities trading by those who misuse such information. I measured insider trading by the number of citations received by corporations engaged in insider trading for the period of consideration 2002-2012.

The SEC defines *insider trading* as a term that most investors have heard and usually associate with illegal conduct. However, the term includes both legal and illegal conduct depending on the context. Insider trading that is perceived to be legal is a process where the corporation’s insiders such as managers, officers, directors, and employees, purchase and trade stock in their own firms. The rule of thumb is that when company insiders do trade in their own stocks or securities, they must communicate or reveal their dealings to the SEC.

Managerial incentives: A process where executive managers can select the type of project that their firm can undertake. The argument surrounding this is that the executive manager has the incentive to select investment projects that will reduce the variability of the firm’s earnings stream, *ceteris paribus*. This can be due to the overinvestment of a manager’s human capital in a single firm as well as the consequence of under diversification of a manager’s personal wealth portfolio (Aboody, Levi, &

Weiss, 2017; Akbulut Merchant, Jansen, & van Lier, 2016; Chesney, Stromberg, & Wagner, 2016).

Performance-based compensation: An incentive-based form of compensation reserved for hedge fund executive managers or elite portfolio managers. The basis of this compensation is a percentage of total assets managed. This will be paid out if the portfolio manager is able to deliver returns that are above a pre-specified level such as performance in relation to the S&P 500 (Bennett, Bettis, Gopalan, & Milbourn, 2017; Bettis, Bizjak, Coles, & Kalpathy, 2016; Chen, Chung, Peters, & Wynn, 2016; Devers & Sanders, 2016; Woo, 2017).

Real Earnings Management (REM): Happens when managers undertake actions or make decisions that deviate from best practices in order to increase the amount of earnings reported.

Stock-based compensation: Directly related to stock price and firm performance, bringing compensation risk to executives due to uncertainty of future wealth (Nagata & Hachiya, 2007).

Stock option compensation: A way that corporations use stock options to reward employees, though this is mostly restricted to executives. It is important that employees with stock options know whether their stock is vested and will be able to retain its full value even if they are no longer employed with that company. This is because the tax consequences of the stock options depend on the fair market value of the stock. If the

stock is subject to tax withholding, the tax must be paid in cash, even if the employee was paid by equity compensation (Carberry & Zajac, 2017; Devers & Sanders, 2016).

Stock option backdating: The process where firms grant an option using a date prior to the date that the company granted that option. Doing it this way allows the exercise price of the granted option to be set at a lower price than that of the company's stock at the granting date. This process makes the granted option in-the-money and of value to the holder (Dechow & Tan, 2016; Janney & Gove, 2017).

Trading profits: The amount of profit that an investor can derive from buying and selling short-term securities, or those that the investor holds for less than 1 year. Trading profits can be substantial if the investor knows what he or she is doing, but there is risk involved. Governments often seek to encourage long-term investment at the expense of short-term, and because of this, taxing of trading profit occurs at the higher income tax rates instead of the capital gains rate (Hirshleifer & Usman, 2016; Van Vliet, 2017a, 2017b).

Assumptions

Due to the occurrence of fraudulent activities conducted within well-known and highly publicized corporations, such as Enron, WorldCom, and Tyco, I assumed that corporate insider trading and EM is present in most companies in some form. Additionally, I assumed that the archival data was accurate and valid. As such, I also assumed that the companies analyzed were accurately reported as having engaged in fraudulent activities or not.

Scope and Delimitations

In this study, I examined insider trading patterns and EM with respect to AEM and REM after the SOX Act of 2002 and up to 2012. I focused on a sample of randomly selected publicly trading companies listed in the NYSE. I did not examine the reasons why individual investors made certain stock purchasing decisions based on the information they have at their disposal. I used archival data that I obtained from the SEC, Compustat, Institutional Brokers Estimates System, CDA Spectrum database, Execucomp database, and the NYSE.

Limitations

I centered the present study on publicly quoted companies that report their earnings to the SEC. These companies offer different types of services to the public, which may be under the purview of separate parts of the company. As such, it is conceivable that insider trading and EM could be associated with different portions of the firm depending on what occurs with planning and forecasting.

An additional limitation lies in the nature of archival data. As I did not collect the data, there is little information regarding potential sources of errors, bias, or internal and external validity of the data. Additionally, EM or stock changes may be a result of events from within the industry and not tied to insider trading or earnings manipulation due to fraud or financial misstatement. However, the existing literature on earnings announcements as well as other changes in stock returns provided viable reason to investigate this issue (deHaan, Shevlin, & Thornock, 2015).

Significance of the Study

EM is a part of a corporation (Chen et al., 2015), and the methods used are important to this study. It is also a social issue because manipulations of earnings through insider trading, either through AEM or REM, can affect society such as creating uncertainty in the economy that can affect workers, individuals, and investors who will lose funds they have invested. Therefore, I aimed to add to the current literature based on the issues or problems created by EM manipulations through things such as buy backs, stock options, executive incentives, stock based compensation, as well as make recommendations that may improve the efficiency of SOX compliance and corporate governance. I also aimed to build on findings reported by Chen and Huang (2013) with additional relevant effects with similar samples. Corporations can predict material weakness through audit reports in EM through better forecasting and proper vetting of investments to access the risk involved as an effective short-term solution to the problem.

A gap existed in the literature regarding insider trading as it relates to EM, because corporations manage their earnings through a variety of methods such as AEM and REM. Firms mostly use AEM, as it allows them to boost performance (Cohen, Dey, & Lys, 2008). But firms are now using REM after the SOX Act because of the additional scrutiny imposed by the act to enhance firms' performances in the eyes of investors (Chen et al., 2015). Carrying out business in this form could lead to falsification of financial reporting that can lead to negative economic cost to the firm, investors, and the public. This study is significant, as it may provide insights into the stream of occurrences

featured by the financial scandals that led to the enactment of the SOX Act in 2002.

Through this research, I aimed to increase awareness of the impacts that equity-based compensation offers on broad managerial strategies that are affiliated to using optional or elective accruals in concurrence with insider trading contingent on firm performance.

Significance to Theory

Information is key to the success of businesses; however, it is important how firms disseminate information to the appropriate channels. There may be a link between insider trading and earnings manipulation, which may lead to anomalies in stock market inefficiencies because the information to the earnings announcement is limited. For example, there may be a connection between insider trading and EM when it comes to the dissemination of asymmetric information (Agarwal & Singh, 2006). This study can support previous theory on insider trading and auditing by providing information on the association between insider trading and EM.

Researchers such as Crouch (1970), Clarke (1973), Morgan (1976), and Westerfield (1977) found an undeviating relationship between trading volume as well as price that is stable with the day-to-day capacity for both market listing as well as independent movement of share price. Grammatikos and Saunders (1986) provided further evidence that volume is stable with price variability. Rutledge (1970-1980) also supported a steady relationship between day-to-day volume and the absolute price changes for 113 out of a total of 136 future contracts. This research relates to insider trading based on the amount of information released to investors or kept for personal

gain. As such, the study adds to the theory by providing an understanding of how trading volume and price may have led to the actions that resulted in the passage of the SOX Act.

By using Gunny's (2010) on the wealth creation, financial risk, securities valuation, and financial decision processes as a foundation for the understanding of EM as well as the expectations regarding the management of these firms when it comes to taking on risky investments, this study can expand understanding on EM in relation to insider trading. Using this method could also facilitate implementing financial strategies that will provide diversification of portfolios, corporate governance, risk management and assessment, and how to curtail any misrepresentation on the part of the audit firm and the firm it is representing.

Significance to Practice

EM is one way that corporations measure their performance through a variety of ways either through AEM, REM or through proper earnings forecast. However, insider trading aligns with EM in a negative way that is not advantageous to investors, as they have limited information to base their investing decisions on. If the earnings announcements within the publicly traded firms increases the value of the firm or the performance of the firm and trigger stock price changes due to available information, then the opportunity may exist to use these announcements to drive investor confidence in the stock pricing and returns on investments. Management decisions to make information available to investors in a timely manner without hiding some of the information will drive up the value of the firm holding every other thing constant. These

decisions sometimes may either negatively (presence of insider trading) or positively (absence of insider trading) propel investors into stock purchasing or selling decisions. This could result in timing of equity financing opportunities for the firm. Based on this information, this study can contribute to practice by adding information not only on the fraudulent reporting that lead to the SOX Act, but also to the association between insider trading patterns and EM citations for a randomly selected sample of publicly traded companies after the enactment of the SOX Act. Based on this information, this study can contribute to business practices by adding significant information on insider trading patterns and earnings management.

Significance to Social Change

If earnings announcements leads to investment decisions, then the information disseminated by corporations should be true and reliable as well as comparable. The research questions posed in the study address the real-world problems of financial crisis as well as fraudulent financial reporting that led to the enactment of the SOX Act of 2002. This may change, create, or revise reporting requirements for organizations. The result of these outcomes of addressing fraudulent financial activities may lead to social change that will rid the organizations, communities, and the society of the unethical behavior.

The insight provided through this study may be able to help financial analyst and practitioners to improve corporate social responsibility and corporate governance. The research may also broaden insight of transparency as well as proper disclosure of the

firm's financial reports and books, enforcement of SEC and SOX rules and regulations, and create shareholder activism in a vigorous way. This could be a possibility by involving minority shareholder watchdog groups, thereby increasing minority shareholder awareness.

Summary and Transition

Perceptions of investors have a direct influence on a corporation's equity values and stock pricing (Kolk, 2013). This could be important to corporate competitive advantage and the nurturing of investor confidence in the business spectrum. Therefore, I sought to discover what relationship existed between insider trading patterns and EM.

In Chapter 1, I introduced the consequences of insider trading and EM with respect to its effect on the integrity of financial statement. Some researchers have noted the absence of corporate governance by these corporations as highlighting this issue while others have argued that authorities and agencies such as the SEC were not proactive enough to spot fraudulent financial reporting before it occurred, whereas others blamed the auditors and auditing firms. Consequently, the public, prospective investors, regulators, auditors as well as other interested parties seem to have little faith, confidence, or credence in corporations' financial statements. In Chapter 2, I review the related literature centering on prior research in the areas of insider trading and earning management.

Chapter 2: Literature Review

Introduction

I started the literature review by considering research on EM citations (Khan, Mather, & Balachandran, 2014) and insider trading patterns (Chen et al., 2014) to begin exploring their possible association (Kraft, Lee, & Lopatta, 2014). The literature covering EM was extensive, but literature on insider trading patterns was limited and dated (Kothari, Mizik, & Roychowdhury, 2015; Lo, Ramos, & Rogo, 2017; Sawicki & Shrestha, 2014; Xue & Hong, 2016). I focused on a brief history of insider trading patterns and EM citations. In the literature review, I explored the attributes of insider trading and EM to see if abnormal profits are reported due to trading patterns (Ali & Hirshleifer, 2016). Other researchers examined incentives and factors that drive insider trading patterns (Dalko & Wang, 2016) and EM, efforts to mitigate and fight insider trading and EM, key education from insider trading and EM and their role in firm performance. Additionally, I explored research on executive compensation structure and its adverse effect on management behavior (Almadi et al., 2016; Sheikh & Ali Shah, 2016), including incentive related to agency problems when it comes to options compensation. Finally, I also explored literature on AEM and REM. In this chapter, I provide a review of the literature and conclude with a discussion of the gap in research and the ways in which this study may fill this gap.

Literature Search Strategy

The literature search strategy includes use of publicly available secondary data that are readily available and were obtained from the SEC, Compustat, and Institute of Broker Estimates System, CDA Spectrum database, Execucomp database, NYSE, Walden university library database, and edited accounting and auditing textbooks as well as google scholar. The key search terms I used include *earnings management, insider trading, earnings manipulation, fraudulent financial reporting, information asymmetry, accrual base earnings management, real earnings management, corporate governance, corporate social responsibility, fraud, auditing, SOX Act of 2002, and stock base compensation and corporate fraud.*

I focused on the period between 2002 and 2012. The scope of the literature review, in terms of years searched, followed the policy set by Walden University of searching for articles published within the last 5 years. I saw a lot of literature on EM and a limited amount of literature on insider trading or insider trading patterns. Because of the limited amount of the literature on insider trading patterns, my study went beyond the 5-year guideline, as some of the dated articles researched are important for proper analysis of the period considered (Korczak, Korczak, & Lasfer, 2010). The type of literature sources searched are journal articles surrounding the topic of my dissertation. I also searched for past Walden and non-Walden dissertations related to my study as well as peer-reviewed journals by using the ProQuest search engine, business source premier, ABI/Inform, Thoreau, and Ebscohost.

Theoretical Foundation

Theories are known to mean the assumptions, constructs, and facts that give a reasonable explanation of cause and effect (Seaborn & Fels, 2015). Many theories work in the financial spectrum to provide a solid foundation for this research study. The theoretical framework for this study was based on the accounting, finance, and auditing theories of Arens et al. (2014), Glover et al. (2014), Fruhan (1979); and Haugen (2001) as well as financial theories of portfolio performance. These theories address the nature of EM, corporate finance, risks and returns investments, cost of capital, auditing, and assurance services with respect to firms' managements of their earnings through investments, and fees charged during audits engagements (deHaan et al., 2015). These theories also address the nature of how investors value investment portfolios as well as the governance needed to sustain the firm (Dittmar & Field, 2015). This framework is supplemented using current research by Carter (2013), Chen and Huang (2013), and Desir et al. (2014) in the areas of EM, corporate fraud, corporate governance, SOX, audit fees, auditor independence, audit committee, corporate social responsibility audit policies, and financial reporting and accounting scandals from 2000-2012. Additionally, I used Gunny's (2010) approach on the wealth creation, financial risk, securities valuation, and financial decision processes as a foundation for the understanding of what EM means and what is expected of the management of these firms, especially when it comes to taking on risky investments that can harm the firm.

Using the theoretical framework for this study, I built on past research studies that have been conducted on what used to be common practice before the enactment of the SOX Act in 2002 (Hossain et al., 2011). I also built on past research on corporate fraud and its effects on firms' post SOX Act (2000-2012) in publicly trading companies to see if there is an effect on prevention of insider trading to boost EM. Through my study, I examined the nature of EM, insider trading, corporate governance, corporate social responsibility, audit fees, auditor independence, financial reporting, and how the public as well as investors value the information that they receive.

In addition to the framework for this study, other theories are important to note as they apply to examining financial businesses. For example, in corporate finance, the pecking order theory postulates that the cost of financing increases with asymmetric information when financing comes from three different sources: internal funds, debts, and new equity. Donaldson first introduced the pecking order theory in 1961, and it was modified in 1984 by Myers and Majluf. The theory indicates that companies give priority to their source of financing by starting internally before using equity to finance projects (Lemmon & Zender, 2016). However, there is asymmetric information due to managers knowing more about the prospects of their companies. The managers' risk and value more than outside investors, as it is a choice between internal or external financing and between debt or equity issue. Asymmetric information favors the issue of debt over equity because debt signals the board's confidence that an investment is profitable and that the current stock price is undervalued (where stock price is over-valued, the issue of

equity would be favored). On the other hand, the issue of equity signals a lack of confidence in the board and constitutes that the share price is over-valued, and an issue of equity leads to a decrease in share price. This theory related to my research, as it centers on how information has been processed and how the information is delivered to the outside investor.

Additionally, the accounting scandal of early 2000 and the financial crisis of 2008 left many investors wondering if they could still trust the market can caused researchers such as Ma (2015) to look at the short comings of traditional financial theories as not serving the needs of investors such as efficient market hypotheses and mean-variance portfolio theory. As an alternative, the adaptive market hypothesis was proposed by Lo (2004, 2005, and 2012). The adaptive market hypothesis suggests that there are intelligent but fallible investors who adapt to the market's changing conditions. This is based on the amount of information that they have received, which supports the importance of macro factors and the sentiments that drives assets returns. Ma also introduced a framework theory to suggest that investors could expand or supplement their investment decisions based on information received regarding economic changes, regimes, ongoing market returns, and volatility of the market.

Another theory is the efficient market hypothesis, which is an investment theory that states that it is impossible to outperform the market or "beat the market" because all stock market efficiencies will make share prices incorporate and reflect relevant information that is available for market transactions (Yusoff, Salleh, Ahmad, & Idris,

2015). According to the efficient market hypothesis, stocks will always trade or sell at their fair market value on stock exchanges. This makes purchasing undervalued stocks or selling stocks at an inflated amount impossible for investors. Therefore, outperforming the market through expert stock selection or market timing should be nearly impossible. The only way for an investor to have a higher return is by purchasing investments that are risky (Milian 2015). The efficient market hypothesis is the cornerstone of modern financial theory; however, it is controversial, and many theorists have challenged this theory. For example, Chan, Ikenberry, Lee, and Wang (2012) argued that not all information is available or released, and Van Geyt, Van Cauwenberge, and Bauwhede (2013) noted that insiders can profit from information at their disposal. Other challenges come from examples like Warren Buffet, who have consistently beaten the market over time, as well as events such as the 1987 stock market crash when the Dow Jones Industrial Average fell below 20% in a single day, showing that share prices can deviate from their fair value. Despite these challenges, this theory may or may not be accurate for insider trading and EM, as insiders have access to information before it reaches the outside investor (Agrawal & Cooper, 2015).

The adaptive market hypothesis, as mentioned earlier, was proposed by Lo (2004) to reconcile economic theories based on the efficient market hypothesis, which led to a behavioral market hypothesis that suggests that the market is consistent with behavioral economics by applying the principles of evolution to financial interactions. Behavioral theories state that an evolution happens in the market by emphasizing prior understanding

and behaviors (Mirzaee Ghazani & Khalili Araghi, 2014). Researchers have shown that the adaptive market hypothesis can be used to emphasize the importance of detecting a nonlinear period, not only in time periods but also in the full-time series surrounding financial events (Coronado Ramírez, Celso Arellano, & Rojas, 2015). This is important to patterns of insider trading with respect to timing of information and trading that leads to EM citation. The adaptive market hypothesis helps predict that markets are not efficient but switch between times of sufficiency and times of inefficiency at different points. This includes what could occur when corporate insiders have access to information at the expense of investors or shareholders. This leads to the benefit or profit for themselves and engagement in earnings manipulations before making the information available to others.

Other researchers have proposed approaches to resolve any issues with the adaptive market hypothesis or efficient market hypothesis. The adaptive investment approach is an alignment between the adaptive market hypothesis and the efficient market hypothesis (Rebaudo & Dangles, 2015). The adaptive investment approach theory states that current and future investors could adjust their investment level on a continuous basis to reflect the market conditions as well as protect against volatility of investment (Rebaudo & Dangles, 2015).

Aside from the market hypotheses and the adaptive investment approach, the arbitrage pricing theory is an asset pricing model based on the notion that a return on asset could be predicted by using the relationship that exists between that asset and other

common risk factors. The arbitrage pricing theory, first introduced in 1976 by Stephen Ross, predicts the relationship between the returns of a single assets and the return of a portfolio through a linear combination of many independent macroeconomic variables (Huberman, 2005). The arbitrage pricing theory describes the price where a mispriced asset is expected to be. It is often seen as an alternative to the capital asset pricing model because the arbitrage pricing theory model has a more flexible assumption requirement, but the capital asset pricing model formula requires the markets expected return. On the other hand, arbitrage pricing theory uses the risky asset's expected return as well as the risk premium of several macroeconomic factors (Andriotto & Teti, 2014). Arbitrageurs may use the arbitrage pricing theory to profit by taking advantage of mispriced securities, which have prices that differ from the theoretical price predicted by the model (Raei, Ahmadiania, & Hasbaei, 2011). By shorting an overpriced security, while going long in the portfolio as the arbitrage pricing theory calculations were based on, the arbitrageur can make a theoretically risk-free profit.

Moving past the capital asset pricing model allows for improved factors for innovation and the optimization of the risk and return tradeoff and allows for the addition of extra variables to an already accepted formula, thus improving knowledge (Fulga, 2015). For instance, Fulga (2015) also gave a description of the arbitrage pricing theory to represent each added variable as a singular beta. Through the addition of each variable beta, the linear equations that aided in the prediction of financial accuracy improved. By adding insider trading patterns and EM, beta would aid in better financial predictability

and decision-making for investors who lack certain information due to nondisclosure practices of corporate insiders when it comes to stock options or buyback options (Agrawal & Cooper 2015).

Another theory of model is the Black-Scholes model, which is based on the notion that allowing for the purchasing and selling of some assets, the risk involved in the purchasing through hedge funds is modified (Subramaniam & Jin Dong 2012). For example, Subramanian and Jin Dong (2012) used the Black-Scholes model in investigating the influence of executive market repricing when corporate managers decide to take risks. It is possible that management might be able to mitigate the amount of risks involved in their decisions if they are concerned with insider trading that might lead to EM or earnings manipulation at the detriments of investors or shareholders.

Finally, an important assumption in financial theory is the behavioral theory. The behavioral theory states that there are certain circumstances where individuals are faced with certain constraints. An example is when compensation is based on performance, individuals will attempt to maximize any opportunity and seek the greatest profit possible either for personal gain or for increased value of the firm (Agrawal & Cooper 2015). There are some signals sent out into the market that stem from corporate insiders' desires to maximize every opportunity that they have at their disposal based on the information they have to share with shareholders or investors to make informed decision; however, some have argued that this happens on a rare basis (Grazzini, 2013). Additionally, behavioral theory has been used to analyze labor economics to look at the exploitation

employed by management with a clear description of an emphasis on its relational nature in labor and income allocation (Yoshihara & Veneziani, 2013). Therefore, behavioral theory may apply to the profit maximization sought by corporate insiders who engage in insider trading. This leads to EM either in a positive or negative way, which can be applied to other industries. The behavioral theory may explain the modified the desires of corporate insiders. Stakeholders in the publicly traded firms seek optimal maximization of profit that will increase the firm value by putting out correct and reliable information for everyone to see and use at the same time and make well-informed decisions.

Financial Theories

Insider trading activities and EM is a huge part of the accounting and finance literature, the review in this research will not be complete without considering the financial theory that has guided the public corporations. Timing is important when it comes to share pricing as the market reacts to the environment and what is happening within the economy at every time of the day. Dittmar and Field (2015) asserted that there is a chance of repurchase pricing adjustment in favor of market timing announcements. Dittmar and Field investigated corporate managers using different methods of stock repurchase pricing to see if the market was timed when corporate negotiation decision was made regarding issuance and repurchase of securities.

Dittmar and Field (2015) analyzed current and past research literature and found supporting evidence for market-timing hypotheses. However, they concluded that the results remain unclear. One of the reason given for the lack of unclear conclusion is based

on the long-run horizons of the amount of work involved after the announcement events, as well as clear evidence that showing firms making announcements regarding their intentions to repurchase and do not always follow through. This leads to a legitimate question regarding the intent of making the announcement. Other reasons given by Dittmar and Field for the lack of clarity in the literatures was that repurchases were often based on quarterly or annual data regarding the amount paid for such securities and not the purchase prices paid for such exchanges.

In their research, Dittmar and Field (2015) used monthly data relating to repurchase pricing that are included and found in the 10-K and 10-Q filings of these firms with the Securities Exchange Commission electronic data gathering, as well as retrieval database. They retrieved security price averaging through the Center for Research in Securities Pricing. They used these tools to ascertain if corporations are capable of timing the market in an effort of repurchasing their stocks. Their sample consisted of 2,237 firms and 38,900 firm-months during the periods of 2004 and 2011.

In conclusion, Dittmar and Field (2015) showed that mispricing was evident in the period covered when the decision was made by the corporation to announce their intention with respect to repurchasing. They scrutinized the prices paid for such repurchases, as well as how these were related to the announcements. They showed that information asymmetry, analyst forecasting, as well as stated motivation were all related to pricing on the market. The researchers showed that corporations pay less prices for repurchasing of stock after a price run down of the stock and even pay a much lower

price after a downturn of the market. After controlling for the Fama-French indicators, Dittmar and Field (2015) noted that corporations showed a positive alpha of .3% monthly, during the 3-year period that followed the purchase of the securities. The above assortment is an indication that market announcements could be of benefit to organizations during insider trading activities that can lead to increase in earnings. Increase earnings, therefore, can lead to the determining how financial analysts can use other corporate announcements to control their own stock valuation opportunities. Thus, if this theory is deemed correct, then the announcements made by the executive management officials could also lead to changes in stock pricing or stock price abnormalities.

Earnings management also has to do with timing of announcements. DeHaan et al. (2015) asserted that there is a direct influence on stock pricing that changes due to a well-calculated timing of earning management announcements, which could also lead to abnormalities. Their study also included critically investigating and examining hidden information and the announcements of information with respect to earnings, as well as the effect these conflicting activities may have on stock return pricing in the periods of good versus poor market attention (deHaan et al., 2015). If concealing or revealing earnings creates variances in abnormal stock returns, then concealing and showing other appropriate corporate facts could also result in homogeneous results.

In conclusion, deHann et al. (2015) argued that there are three required conditions that must exist for this plan to work. Primarily, corporate managers must change the

timing of these announcements as this may give cause to investors to see exactly and precisely what they are attempting to conceal from them. Second, foreseeable variation patterns in investor paying attention are required for this plan to work. Finally, they insisted on the requirement of the practice of corporate management tendency to announce the changes in earning to be dependent on the market changing conditions.

DeHaan et al. (2015) chose the period of 11 years spanning from 2000 to 2011 for their research study, adding credibility to the time period selection of my research study, which is 2002-2012. DeHann et al. (2015) used three dimensions for the announcements taking place, including the time of day the announcements originated, the day of the week the announcements originated, and as the market business of the particular announcement date and the period. They conducted a quantitative regression analysis test to investigate the three market attention variables mentioned, and concluded that there is credible evidence to support their analysis, given certain situaution and circumstances, that timing of the information does influence the announcement of stock pricing (deHaan et al., 2015). These findings gives credence to the theory showing that other announcements could also influence stock pricing either from insider trading activities and earnings manipulation. Within the accounting and financial industry, this is an important theoretical basis to follow.

When corporations decide to manage their earnings either through AEM or REM, as inisders with first hand knowledge of information, they have the first chance of opportunity to announce these actions in a truthful manner. They also have the chance of

picking and choosing the timing of the announcements (Spatt, 2014). It is a fact that firms that utilize the best form of execution for investments and announcements based on truth and reliable information, as well as the other factors considered, are seen to have an increased chance and opportunity for improved financial performance. Spatt (2014) noted that some participants in the market tend to influence market prices in a false manner so as to obtain higher pricing for themselves in the case of an insider trading activity which will lead to earnings manipulation, but created a clear distinction between the market actions as well as trades. Spatt argued that some market participants may conduct trades in order to create distortion in prices. Spatt also noted that these types of trades and actions would lead to both wealth redistribution and inefficient market pricing as in the case of insider trading activities.

Literature Review

Earnings Management

I focused on literature involving EM. Earnings Management is a process that happens when managers make decisions on their own with respect to what financial numbers to include on the firm's financial reports, to manage or influence the corporation's financial performance (earnings; Watts & Zimmerman, 1990). In the context of AEM, which is within the realm of GAAP choices that try to *obscure* or *mask* the true economic performance of a firm (Dechow & Skinner, 2000), or REM, which happens when managers undertake actions or make decisions that deviate from best

practices to increase the amount of earnings reported. In the following section, I explore the literature surrounding these issues as well as highlight the most relevant studies.

I also examined managerial opportunism, a situation in which managers manipulate their earnings numbers for individual or personal gain. The focus is on if corporate executive managers engage in performing earnings manipulations to meet or exceed the market forecast during periods of insider trades, i.e. the *benchmark beating* game. There is a large amount of literature discussing the different methods, incidence, motivations, and consequences of EM, because a considerable amount of attention has been given to it in the academic literature in the past decade (Olsen & Zaman, 2013; Wai Kong Cheung, 2011).

Most researchers have focused on different aspect of this issue as most researchers have investigated different aspects of the problem and coming up with varying contradicting results. Some studies, such as Olsen and Zaman (2013), involved investigation of executive managers' motivations to manage earnings either upwards or downwards, by examining the patterns of insider trading associated with EM as well as the consequences of such actions, whether regulatory enforcement or stock market reactions.

Olsen and Zaman (2013) developed and tested three possible hypotheses on signaling, opportunism, as well as smoothing. The result of their findings was that the buying trades of insiders reduced in frequency relative to the selling trades as earnings are managed upwards. Second, the trading patterns of insiders still holds after controlling

for size and finally, the trading patterns is still present within the categories of past returns when the samples were partitioned concluding that this is consistent with opportunism (Olsen & Zaman, 2013).

Prior research (e.g., Olsen & Zaman, 2013) showed that there are associations between some earnings benchmarks and EM. The literature divides or break earnings into two parts, discretionary and nondiscretionary earnings. The discretionary accrual can proxy for the discretionary or managed portion of earnings and the accruals have been shown to be related to benchmarks that are based on bonus compensation schemes as this is one way the earnings are managed to benefit managers in a decision-making position (Olsen & Zaman, 2013). A corporation's discretionary accruals have to zero out over time; this implication is that when earnings are managed in the current period, it will impact future periods' earnings in the opposite direction when the discretionary accruals eventually reverse because executive managers have the expectations that the nondiscretionary earnings will change in future periods as argued by Olsen and Zaman (2013). Furthermore, Olsen and Zaman (2013) argued that if subsequent nondiscretionary earnings are expected to change, the level of impact from the reversal from previous income values of discretionary accruals on the deviation of subsequent earnings would either be partially or fully mitigated by the change in nondiscretionary earnings. Thus, concluding that the effect of managing earnings toward a benchmark in any given period can either enhance or inhibit the corporation's ability to meet a benchmark in future periods (Olsen & Zaman, 2013).

In their analysis, Olsen and Zaman (2013) used three different hypotheses for their study; opportunism, signaling, and smoothing. For opportunism, their hypothesis was defined as a situation where insider trades are motivated in part by private information and knowledge concerning equity values along with the fact that outside investors do not understand the nature and persistence of accruals. Under this hypothesis, managerial discretion over accruals could be viewed as a means of either delaying or misleading outside investors because managers may be able to manipulate earnings upward to avoid adverse contractual consequences or to hide the corporations' actual deteriorating performance. Additionally, Olsen and Zaman argued that there is evidence to prove that upward EM abounds when the corporation is close to a debt agreement violation. Vice versa, managers are also able to use their discretion to manage earnings downwards when future performance is expected to be good as this income decreasing EM could also indicate the strength of the corporation by conveying the notion that the corporation is able to withstand additional expenses and remain profitable.

For the signaling hypothesis, Olsen and Zaman (2013) posited that managers use discretionary accruals to communicate their future performance expectations to outsiders "as managerial discretion is a means that managers use to reveal to outside investors about their private expectations about the corporation's future cash flows" as stated by Beneish (2001, p. 3). Healy and Whalen (1998) also reflected this view when they asserted that managers can also use accounting judgment to make financial reports more informative if, for example, certain accounting choices or estimates are perceived to be

costly and therefore credible signals of a firm's financial performance. For the above scenario, Olsen and Zaman (2013) argued that downward EM could be viewed as a sign of future deteriorating performance, because the notion now is that earnings for the current periods are been saved for the future period when performance is expected to be on the decline relative to the current period's unmanaged earnings.

In their third hypothesis, which is smoothing, Olsen and Zaman (2013) posited that earnings are managed for other reasons than opportunism or signaling; under this hypothesis, managerial discretion over accruals is presumed to be related to intertemporal smoothing for temporary earnings shocks to be able to reduce the variability in the reported earnings. This is in line with the findings of Graham, Harvey, and Rajgopal's (2005) survey of chief financial officers. The results showed 96.9% of respondents preferred smooth earnings and 78% of respondents would rather give up economic value in exchange of smooth earnings. Motivation for smooth earnings vary for various reasons to include job security, bonuses, as well as providing empirical evidence supporting the fact that managers do consider both current and future earnings performance when exercising discretion over accruals.

According to Olsen and Zaman (2013), income smoothing could also enhance the informational value of the corporation. This could also result in higher market value as well as lower the perception of market-related risk, because volatile earnings could lead to a greater information advantage for informed investors. This could also lead to a situation of where uninformed investors would prefer smooth earnings by managers, as

evidence suggest that managers have incentives to reduce the volatility in reported earnings by smoothing (Olsen & Zaman, 2013).

Earnings Management and Forecast

McVay, Nagar, and Wei Tang (2006) investigated and analyzed the behavior of analyst where the presence of managerial incentives is felt in order to meet or slightly exceed analysts' forecasts. McVay et al. investigated stock sales as a managerial incentive to describe the discontinuity surrounding analyst forecast benchmark. They argued that the likelihood of just meeting analyst forecast versus missing the analyst forecast is strongly related to subsequent managerial stock sales. They provided stark evidence that executive managers sometimes manage their earnings prior to meeting the threshold as well as selling their shares. McVay et al. concluded with evidence that the relationship between just meeting and eventually selling share does not hold true for non-executive insider managers. This finding is because they do not have the ability to affect earnings outcome, as well as been weaker in the presence of an independent board, thereby suggesting that good corporate governance does mitigate this type of strategic behavior.

Luo et al. (2013) argued that corporate managers have huge discretion in the determination of forecast characteristics; however, little is known on how managerial incentives affects these characteristics. Their research study investigated whether executive managers choose forecast precision in a strategic manner for self-gain. Luo et al. built their research on prior findings that the market reaction to vague forecast is

weaker than when the reaction is based on precise forecast. They provided evidence that forecast disclosed by executive management before insider sales, more positive news forecasts are more precise than other management forecasts, while the opposite holds true for more negative forecasts. Luo et al. stated further that the relationship is inverted for management forecast that are disclosed before insider purchases.

In conclusion, Luo et al. (2013) stated that the results of their analysis are consistent with managers that choose forecast strategically in a precise manner which ultimately leads to increased stock prices before insider sales and to decreased stock prices before insider purchases. Further analyses indicated the impact of managerial incentives on precision forecast is less conspicuous when institutional ownership is high or when the risk of disclosure is high, and is more conspicuous when investors are having a hard time assessing the information at the disposal of the precision of managers (Luo et al., 2013).

There is also a large body of literature discussing the efficacy of EM models like AEM and REM as well as income smoothing topic and their ability to precisely predict EM as well as precisely classify accruals as discretionary and non-discretionary. Buckmaster (2001) furnished a comprehensive reflection of income smoothing topics over the past decade. The researcher found evidence showing that the balance sheet is the focal point in an early income smoothing activity. This finding is in respect to how managers create secret reserves to avoid distributing dividends to shareholders. Dating back to the 19th century, Matheson (1893) provided evidence showing that recording a

large depreciation amount in years that the business is prospering, was one of the methods used in creating secret reserve accounts. However, based on those early papers touching on the topic of income smoothing, Paton (1932) argued against varying depreciation charges as a mechanism to obtain smooth income streams.

Acharya and Lambrecht (2015) developed a theory of income and payout smoothing by corporate firms. This is applicable to situations where insiders have more information about income than outside shareholders. However, property rights have ensured that outsiders can enforce a fair payout based on the methods used citing Kohler (1933). The argument was made by Kohler that a corporation's operational risks should not be concealed by different methods of accounting. The reason given was that corporate insiders can set payout to meet outsiders' expectations and then turn around to underproduce in order to manage future expectations downwards using the same or varying accounting methods. Acharya and Lambrecht (2015) observed income and payout processes are smooth, and they adjust partially in the short run and over time in response to economic shocks. Acharya and Lambrecht referred to the research of Gordon (1964), who made an argument that accounting practices should be carefully selected in a way that will reduce the variability between current and future earnings. The reason was that the smaller the inside ownership, the more severe underproduction is, which will result in an "outside equity Laffer curve." Their understanding was because selecting accounting practices to smooth income will allow stockholders to better evaluate the prospects of the corporation. This research study was significant because the purpose of accounting is to

maximize wealth for the benefit of the corporation to increase its value rather than measure it. However, in contrast to earlier research studies that normatively investigated accounting practices, later and more current research studies empirically examined the consequences of EM decisions on behalf of corporate managers.

Looking at the more recent research that investigated the topic of income smoothing as it related to EM and insider trading patterns, Shu and Thomas (2016) argued that EM have failed to fool the market, as well as also noting that its profitability to managers is somewhat doubtful. The introduction of different computerized techniques in conducting research in modern times saw an increase in more research into the investigation of the relationship between accounting choices and stock price effects. Shu and Thomas noted that such studies were also conducted by Kaplan and Roll (1972) and Ball (1972). The researchers found no relationship between changes in accounting techniques and stock prices. This lead up to Healy's (1985) study and Buckmaster (2001) to list 107 pertinent research studies in the topic of income smoothing. These arguments only indicated that the literature on the topic of income smoothing is at the heart of accounting research, as well as noting that the various methods, motivations, and results of income smoothing have been of paramount interest to practitioners and researchers alike (Shu & Thomas, 2016).

Executive Compensation

Healy's (1985) research was important to the present study because Healy was the first to relate insider trading patterns to EM patterns and how they are tied to executive

compensation. Healy's research shows that managers can manipulate earnings in their favor so as to increase their compensation from bonus plans. Through this study, I extend past research, such as Healy's (1985), by investigating the relationship that exists between insider trading patterns and EM citations.

Many researchers have examined different causes, techniques, and consequences of EM decisions, while other research have investigated managerial wealth creation by executive managers that are related to incentives for earnings manipulations (e.g., Healy, 1985). Some more recent studies examined issues of earnings manipulation and compensation structure and how it relates to insider trading. First, McVay et al. (2006) noted that there is a higher occurrence of meeting consensus forecast by executive managers that sell their stocks which is a proxy for EM.

Second, Denis and Xu (2013), Li et al. (2016), and Sheikh and Ali Shah (2016) all identified links tying corporate executive compensation and future insider trading together and they all argued that their links are brought together by EM. In this research study, I examined the association insider trading patterns and EM citations. I utilized established empirical techniques to detect EM. At the time of this study, there was no consensus in the EM literature about the different methods, frequency, as well as the consequences of EM.

Earnings Management and Accruals

For the purposes of this study, the assumption stemming from previous research was that EM by executives may not always be fully detected by prospective investors

evaluating the firm. Additionally, EM as originally measured by the Jones or modified Jones model (Jones 1991) is a proxy for such earnings manipulation (Bartov et al., 2017; Dechow et al. 1995; Godsell et al., 2017; Lo et al., 2017). Jones's (1991) original research study involved an investigation to determine whether companies that stand to benefit from import-relief investigations have the tendency to manage earnings downwards. Jones research study developed a measurement methodology that helps to estimate the discretionary component of total accruals, which in turn is a measure of EM.

Jones (1991) developed a model expectation that was specific to firms. The model measures normal accruals, the expectations model helps controls for the relationship between economic conditions as well as the level of total accruals. Jones's findings indicated that during import-relief investigations, executives decrease firm income by reporting income-reducing discretionary accruals. Jones developed a methodology that went beyond previous methodologies used to measure EM. Past research studies either investigated single accruals or total accruals as a proxy for EM. Thus, the development of a large-sample estimation procedure for EM by Jones became one of the most popular methodologies as it has many variants that are attempting to improve on the original model (Bartov et al., 2017; Godsell et al., 2017; Jones 1991).

As with all studies, Jones' methodology was not without criticisms, as other several ensuing research studies opposed or disputed the efficacy of the Jones (1991) model that is used in detecting EM. Amid the researchers who investigated different methodological issues in detecting EM, Bartov et al. (2017) and Dechow et al. (1995)

evaluated the ability of separate models to detect EM. They did find that a more modified version of the Jones' model actually produces the most powerful way to identify EM. However, for all the different models, the power of the tests is considerably low for EM of reasonable magnitudes. This is an indication that the Jones model or its variants identifies EM with error.

Thomas and Zhang (2001) and Fields et al. (2016) examined the accuracy of six different accrual prediction models. Their findings indicated that apart from the Kang and Sivaramakrishnan's (1995) model, which other researchers also replicated (Baber et al., 2011; Fields et al., 2016; McNichols, 2001; Thomas & Zhang, 2001). The remaining five models' ability to be able to predict total accruals was seen to be less accurate than a naïve model that was able to predict total accruals equaling 5% of total assets. Bernard and Skinner (1996) and Dong and Wang (2017) also recognized some of the problems associated with the extant discretionary accrual models and they recommend that developing a better and more specified model of the accrual process would be appropriate. These authors advocated for the modeling of accruals in an industry or modeling particular components of accruals.

Kang and Sivaramakrishnan (1995) proposed two separate models that can be used to detect EM: the first one is based on an instrumental variable approach, and the second one is based on utilizing a generalized process of moment estimation procedure. Simulations were conducted in order to be able to evaluate the efficiency of these models that was proposed as compared to that proposed by Jones. At the end of the test, their

findings showed that their model was more powerful and more robust to Type 1 errors than that proposed by Jones model (Kang & Sivaramakrishnan, 1995).

Other researchers also contributed to the research on EM. Some of these researchers discussed trade-offs associated with the three most commonly used research designs in the EM literature (Beaver et al., 2016; Diane et al., 2016; McNichols, 2000, 2001; Thomas & Zhang, 2001). The first study employed aggregate accruals, the second study was based on specific accruals, and finally studies that are based on the distribution of earnings. Beaver et al.'s (2016) argued that because of the possibility in misspecification that are associated with the Jones' models, the assumption is that research studies based on them may not be reliable enough to assess the extent of EM in the contexts that is of interest to researchers. Beaver et al. noted that further contribution to the literature will come from researchers who investigate EM based on industry-specific contexts or researchers who able to investigate specific accruals. McNichols (2001) also predicted future contributions from research studies that examine the distributional properties of earnings after EM where there is a strong managerial incentive to meet or to exceed targeted earnings. McNichols specifically surmised that corporations that have greater expected growth are more likely to have greater accruals vis-à-vis corporations that have less expected earnings growth.

Other researchers also added to the discussion in an identical line of thinking. Researchers like (Abbadi et al., 2016; Chowdhury, et al., 2017;Guay et al. 1996; Leung et al., 2017; Pham et al., 2017; Subramanyam 1996) engaged in the investigation of

different models of discretionary accrual in a managerial contest. Of all the tests carried out, three managerial discretion hypotheses with different models were carried out. The first hypotheses was the performance measurement hypothesis, the second one was the opportunistic hypothesis, and the third was based on noise hypotheses. Based on the result of the tests carried out, five extant models accurately estimated accruals that resulted from management opportunism based on the Jones and modified Jones' models, other models tested could not be distinguished from random splits of accruals into discretionary and non-discretionary components.

Other than the Jones (1991) model, along with its variants, the literature on EM has advanced and introduced various and other techniques in which one can use to measure such earnings manipulations (Amar & Chabchoub 2016; Burgstahler & Dichev 1997; Degiannakis et al., 2017; Leung et al., 2017; Pham et al., 2017). Burgstahler and Dichev (1997) introduced a non-parametric methodology that they used to detect EM. These researchers relied on the distributional properties of earnings so as to be able to visually investigate the incidence that may be associated with certain earnings numbers, their findings showed that firms engage in EM so as to be able to circumvent earnings decreases and losses. Further testing was carried out in cross-sectional distributions of earnings, and their findings also showed that there is an unusually low frequency of corporations that have minimal reduction in earnings or reduced losses.

Barton and Simko (2002), on the other hand, were able to devise a parametric model that may aid in the measurement of managerial flexibility in the EM literature.

Other researchers have utilized this model (Andreas, 2017; Chan et al., 2015; Garven & Taylor, 2015; Greiner, 2016; Greiner et al., 2017). Barton and Simko argued that the balance sheet accumulates the effects of previous accounting choices, so the level of net assets partly reflects the extent of previous EM. Their prediction was that the ability of managers to optimistically bias earnings decreases with the extent to which the balance sheet would overstate net assets that are relative to a neutral application of GAAP. To test this prediction, Barton and Simko investigated the likelihood of reporting various earnings surprises for 3,649 corporations from 1993–1999. Their findings showed that the likelihood of reporting larger or smaller negative earnings surprises decreases with their proxy for overstated net asset value. This was consistent with their prediction. Barton and Simko also utilized the beginning balance of net operating assets relative to sales as a proxy for income-increasing EM. They defined net operating assets as equity minus cash, liquid securities, and total debt. NOA is a proxy for accrual-based measures of operational net assets.

Barton and Simko (2002) were able to provide proof that net operating assets can capture previous optimism in the financial reporting process by showing that it is positively associated with larger cumulative levels of positive accruals in the past. I attempted to identify unmanaged performance by subtracting the discretionary portion of earnings from total earnings. Other researchers have used this same methodology (Shrieves & Gao, 2002; Sun, 2014; Wang et al., 2014). However, this model has received significant criticism. Similar to Jones's 1991 model, this methodology is also

controversial. Regardless of the criticisms, the Jones model remains the most commonly and widely used model in the measurement of EM (Beneish, 2001; Beneish, Hopkins et al., 2005; Caruso, Ferrari et al., 2016; Wilson, 2015) along with various other research studies augmenting the tests with the non-parametric approach that Burgstahler and Dichev (1997) developed. For the purposes of this research study, the modified Jones model (Dechow et al., 1995) was utilized to measure the discretionary portion of earnings, because past research studies have corroborated it to be the most effective in the detection of accruals that may result from management opportunism.

As the Jones model (1991) and its variants have been recognized to measure EM with some error, through this study I attempted to be precise and make up for such errors by utilizing an alternative measure for EM. Barton and Simko's (2001) measure described is one such alternative and specification. However, their measure is also related to Jones's measure; therefore, there is the possibility that this might also suffer from similar biases. To limit the amount of bias due to utilizing such measure, this study also utilized the distributional properties of earnings (Burgstahler & Dichev, 1997) in some of the tests, but, this EM measure is incompatible for use with most tests.

Accrual Earnings Management

A review of the literature on EM would not be complete without looking at the various methods that firms use in the management of their earnings. The different methods of EM used by corporations include AEM, REM, and classification shifting. Prior to the enactment of the SOX Act of 2002, most firms used AEM as a method of EM

which is mostly preferred by GAAP. REM is also used, GAAP does not frown on the use of REM or classification shifting but recommends AEM since most firms depends on their accruals for financial reporting.

The literature on EM and the different methods of EM is exhaustive as can be seen from past researchers such as (Abernathy et al., 2014; Curtis et al., 2013; Doukakis 2014; Gao et al., 2017; GaoIpino & Parbonetti 2017; Kothari et al., 2015; McVay et al., 2006; Roychowdhury 2006). These researchers have commented extensively on EM looking at it from different angles to see why and what is behind the motive for managing earnings for their firms the way they did.

Firms use different techniques in the management of their earnings. However, the focus has been placed on three methods that is widely used, with a focus on AEM as there is documented proof in several contexts, using different accruals, and also in response to many managerial incentives (Abernathy et al., 2014). AEM is said to happen when executive use discretionary accruals borrow earnings from future periods in order to increase their current period earnings or on the opposite, push their earnings from the current period in future period to be able to reduce current earnings. This will increase the cost of AEM used for current earnings, this in addition to the cost of detection will result in a reduction of one-to-one future earnings (Abernathy et al., 2014). They argued that doing this would lower future period earnings in a mechanical way because of net income that have been accelerated to the current period. They further stated that there is cost and

constraint involved in the use of AEM and executive managers should ensure that the benefits outweigh the cost of using AEM when making decisions.

Real Earnings Management

Real earnings management is another method used by firms to manage their earnings. There is no clear definition of REM. However, (Abernathy et al., 2014) argued that it is a process that occurs when executive managers move away from high business decisions with real activities like over production in order to lower cost of goods sold, reducing discretionary expenditures like research and development in order to be able to meet earnings target. Initially, the literature on REM was mainly focused on how REM is used to manipulate research and development expenditures in order to improve the firm's current operating results (Baber et al., 1991; Bushee, 1998; Dechow & Sloan, 1991). Because firms used REM to manipulate earnings through research and development, other researchers conducted studies to determine whether corporations use REM to manipulate earnings. Thus, there was the motivation to do further research on the use of REM. Graham et al. (2005) carried out a survey and interviewed more than 400 corporate executives in order to determine some of the factors that drive reported earnings and disclosure decisions. Their findings showed that managers are willing to take economic actions that would rather have a long term negative effects on the firm rather than make decision that within GAAP accounting choices to manage their earnings. The study showed that 78% of their respondents admitted to sacrificing long-term value to smooth

earnings, along with working to maintain predictability in earnings and financial disclosure.

Graham et al.'s (2005) findings are also consistent with the result of Chowdhury's (2006) research, in which the author provided empirical proof to show that executives manipulate earnings to circumvent the reporting of annual losses or missing forecast by analyst using real activities measures. Specifically, Chowdhury's research shows that managers engage in the manipulation of sales to decrease their discretionary expenses and engage in the overproduction of inventories to reduce cost of goods sold, so as to improve their reported margins. Chowdhury conducted a cross sectional analysis and revealed that these activities are not that prevalent in the presence of investors that are sophisticated. The researcher also argued other factors influence real activities manipulations. These includes membership in the industry, the stock of inventories and receivables as well as incentives to meet zero earnings.

Other researchers studied different types of REM that can be used in the process of earning management. Methods such as sale of profitable assets as researched by (Bartov, 1993; Herrmann et al., 2003). They presented empirical investigation to show whether executive managers engage in earnings manipulation with the timing of income recognition from the disposal of long-lived assets and investments. Researchers studied sales price reductions (Gao et al., 2017; Jackson & Wilcox 2000; Sun & Liu, 2016; Xu et al., 2007). Researchers have investigated the method of derivative hedging, stock repurchases, securitizations, and cutting advertising expenses (Barton, 2001; Cohen et al.,

2010; Cohen & Zarowin, 2010; Dechow et al., 2009; Galdi et al., 2016; Hribar et al., 2006; Huang et al., 2017; Jackson & Wilcox 2000; Lovata et al., 2016; Sun & Liu 2016).

Earnings manipulation through real activities by executive managers has the propensity to increase revenue, but it comes with a cost associated with it. For instance, if research and development expenses are reduced to improve the current year net income, there is a possibility that the corporations' future performance will be hurt due to the lost opportunities from the reduced research and development. Thus, the question that is asked is what is driving this decision-making process, could be associated with inside information that is only privy to the managers of the firm? As noted above, earnings manipulation using REM by managers is not a GAAP violation, it is just a questionable business decision making process.

McVay et al. (2006) argued that the cost associated with the detection of REM is lower than AEM. After the passage of the SOX, evidential proof from investigation carried out showed that there was a reduction in the use of AEM and an uptick in the use of REM (Cohen et al., 2008; Cohen & Zarowin 2010; Huang et al., 2017). These findings provided evidence that there is an increase in REM when AEM is constrained or if the cost of detection is highly significant.

Zang (2012), on the other hand, argued that the cost of detection is not limited to just the two methods of EM. The researcher examined the trade-off decision faced by executive management between the use of either AEM or REM. Zang's research was based on the premise of if executive managers engage the use real activities earnings

manipulation and AEM as substitutes in managing earnings. The results showed that executive managers do a trade-off between the two EM methods based on their relative costs stating further that executives adjust the level of AEM in accordance to the level of real activities manipulation that is realized. Zang used an empirical model to incorporate the costs associated with the two EM methods as well as to capture executive management's sequential decisions. The researcher documented a large-sample of evidence consistent with managers using real activities manipulation and AEM as substitutes (Zang, 2012).

Classification Shifting

Classification shifting is another method of EM. McVay (2006) defined classification shifting as a process of misclassifying items within the income statement while net income remains constant. Classification shifting includes shifting expenditures from the operating expenses to non-recurring expenses to increase earnings (Abernathy, Beyer et al., 2014). Although the misclassification of items within the income statement remain harmless because net income remains constant, the information embedded in the different income statement line item is useful to financial statement users (Abernathy et al., 2014). McVay provided proof to support his claim that there is classification shifting between operating expenditures and special items. This is because permanent line items in the income statement are closer to the top which is an indication of a higher likelihood of persistence into the future. On the other hand, transient line items in the income statement that are less likely to continue are closer to the bottom of the statement. Thus,

classification shifting gives a misrepresentation of persistent line items in the income statement and as a result, have the possibility of misleading investors with respect to future performance of the corporation (Abernathy et al., 2014).

Still on the topic of classification shifting, current research proposes that corporations are engaging in classification shifting by moving operating expenses to revenue-reducing discontinued operations to increase their core earnings (Abernathy et al., 2014; Barua et al., 2010). In his investigation on classification shifting, McVay (2006) sampled some U.S corporation and finds that classification shifting is more prevalent when corporations can meet or exceed analyst forecasts. More evidence provided showed that classification shifting is more eminent in the fourth quarter and there is the likelihood that executive managers will engage the use of classification shifting when there is a constrained on them not to use AEM (Abernathy et al., 2014).

Past studies have provided evidential proofs that corporations make the move from AEM to REM when they see that their ability to engage in AEM is constrained. For instance, Cohen et al. (2008) showed proof that corporations have made the switch from AEM to REM after the passage of SOX, which placed high regulatory emphasis on AEM. In a similar manner, Chi et al. (2011) found that corporations that was audited by high quality auditors are more likely to utilize REM because they also see that their ability to manipulate accruals is constrained. Additionally, Badertscher (2011) argued that corporations that are overvalued switch from AEM to REM as they run out of accruals management options to sustain their overvalued equity, while Cohen and

Zarowin (2010) provided evidence that corporations choose to engage in the use of REM around the time of seasoned equity offerings based on the costs related to AEM. Zang (2012) further provided proof that executives utilize AEM and REM as a substitution. She noted that the trade-off decision is based on the relative costliness of each EM strategy. Furthermore, she is of the assumption that executive adjust the level of AEM according to the realized level of REM. Although the above research provides evidence and document a trade-off between REM and AEM, to my knowledge, I have not seen any other research study that includes an investigation of the trade-off between REM and classification shifting while considering associated constraints and how it relates to insider trading patterns (Abernathy et al., 2014).

Researchers examining EM have begun to study all three forms of EM together but none on the three forms with insider trading patterns. For instance, Athanasakou et al. (2011) examined the stock market response to meeting analyst earnings expectations that are associated with EM (AEM, REM, and classification shifting) and earnings forecast guidance strategies. The researchers found corporations that use classification shifting to meet analyst expectations receive a lower market reward than those corporations that are genuinely meeting or beat the earnings target. Their research highlights that there are three earning management techniques available to executive managers that can be used to manipulate earnings, and researchers and regulators should consider all three techniques (Abernathy et al., 2014).

Insider Trading, and Trading Profits

The literature on insider trading includes findings associated with EM, such as the motivations for EM. Some of the studies have been focused on the extent to which executive managers will alter reported earnings for their own benefit as prior studies have provided evidence of an association between managers contractual agreements and earnings patterns (Olsen & Zaman, 2013). The securities act of 1934 welcomed a new dawn in the way business is conducted due to its ratification. This era changed many aspects of stock-exchange dealings, to include the regulation of stock trades by officers, directors, and large shareholders of corporations (Fox & Fox, 2016; Mas, 2016; Smith 1940).

After the regulation was enacted, it was required that insiders file the number of shares they own in their respective firms, as well as to report the sales and purchases of any such stock to the SEC by the 10th of the following month as required by the law. This was required because if insiders make profits as a result of their purchasing and selling activities within a period of six months, the corporation is entitled to recover such profits (Chen & Huang, 2014; Olsen & Zaman, 2013; Sawicki & Shrestha, 2014; Smith, 1940). The motive behind these restrictions on insider trading was to level the playing field that existed between participants in the market, executive managers, company officers as well as institutional investors, and more so especially the small investors. However, there is still this nagging questions that locks around the issue of whether insiders are profiting abnormally from their trades. This is still a thorny issue in

regulatory circles, the media, the academic world as well as the investing public, because there is an overwhelming evidence that points toward the existence of such a phenomenon (Byun & Roland-Luttecke, 2014; Denis & Xu, 2013; Jha, 2013; Olsen & Zaman, 2013; Sawicki & Shrestha, 2014). In the academic field research with respect to this issue, the focus is on whether insider trades generate abnormal profits through different patterns. It also deals with what the sources of such information advantages that managers enjoy, the extent of such special information that they are privy to, and the magnitude of profits that they enjoy because of their privileged position. Corporate executive managers' information about the corporation's earnings quality is one huge source of privileged information (Byun & Roland-Luttecke, 2014; Denis & Xu, 2013; Jha, 2013; Olsen & Zaman, 2013; Sawicki & Shrestha, 2014). Through this research study, I investigated whether managers' access to such privileged information (i.e., earnings quality) leads to strategic insider trades which might influence earnings manipulation, and thus lead to the generation of abnormal profits.

When considering the dynamics in corporate announcements with respect to insider trading patterns and EM, Agrawal and Cooper (2015) asserted that it is important to understand that stock information creates a lot of value. An issue that came up in the lawsuit against the Enron executives was whether they traded corporate securities before the accounting issues were revealed, as this had to do with timing of information to the public. Understanding the underlying patterns and mechanisms of insider trading, the risk within the market, as well as the behavior patterns of the return series of futures, is

important (Agrawal & Cooper, 2015). Understanding this information leads to better decision-making by many groups, including the decision-makers, stakeholders, shareholders, producers, investors, traders, and policy makers. With respect to policy makers, it is important to know and comprehend who the decision-makers are in the respective industry, such as the governmental and nongovernmental agents, so that management can tailor their decision making to benefit current and future investors with accurate information.

Olsen and Zaman (2013) analyzed insider trading and motives for EM, noting that recent studies in accounting and finance have focused on the extent to which managers alter reported earnings for their own benefit. The researchers developed and tested three possible hypotheses utilizing Jones's 1991 model. Olsen and Zaman used this to explain the motivations for EM that is associated with insider trading. These hypotheses are opportunism, signaling, and smoothing. The researchers investigated the patterns of insider trading associated with EM. Their findings showed that the buying trades of insiders decrease in frequency relative to selling trades as earnings are managed upwards, secondly, after they controlled for size, the trading patterns of insider still holds true and finally, when partitioning the sample of past returns, the trading patterns is still present within categories of past returns. They concluded that these results are consistent with opportunism signaling that insiders will take advantage of the opportunity to engage in the insider trading to influence earnings quality (Olsen & Zaman, 2013).

Academic research in managerial trading and stock market profit has been in place and investigated and examined as early as the first part of the past century. Smith (1940) investigated this assertion and reported in his study that insiders engaged in the selling of stocks before or after the stock price peaks but missed extreme highs, while major purchases are followed by recessions and early stages of rising markets. Smith's research result indicated that managers may possess a non-random ability in the timing of the stock price performance of their corporations. Jaffe (1974) was among the first researchers that had an exhaustive conclusive large-sample studies that investigated to see if insider trades benefits from abnormal returns. His research study concluded that insiders do possess privileged information; other researchers support this finding (Finnerty, 1976; Karpoff & Lee, 1991; Lambe, 2016; Odaiyappa & Nainar, 1992). Jaffe also argued that trading on such privileged information is also widespread, suggesting that insiders do violate securities regulations. The research study also indicated that after the public availability of insider trading information, the market usually takes a gradual as well as a prolonged time to react to the new information. This is a finding that is inconsistent with the perception of the efficient market hypotheses.

As the years progressed, new regulations have been passed and that has increased the restrictiveness of insider trades. However, Jaffe (1974) argued that the SEC is only engaged in the prosecution of the most conspicuous cases of speculation based on private information. He also argued that this is due to several factors. The first being that the SEC has the burden of responsibility to prove that there is an abnormal generation of

profits as well as to prove that there is the existence of material private and privileged information. Second, he noted that as a matter of fact, there is still a heavy reliance on the public and the media by the SEC in order for them to know where to start or begin their searches. As this is the case, the probability that the SEC will successfully prosecute executive managers for the possession of privileged information with respect to discretionary portions of earnings seems to be a distant and unlikely possibility. He also argued that the likelihood that the SEC will prosecute insiders because they are strategically timing an earnings surprise to boost stock prices and then concurrently sell their stock is also slim (Jaffe, 1974).

At the time of this study, the regulations have placed restrictions on insider trading that provided incentives to executive managers to be able to *game* the market to be able to increase profit that will be of benefit to them on a personal note. If these restrictive regulations were not in place, executive managers will be able to freely profit from the market because they have access to privileged information, because they will have incentives to withhold privileged information, including information about accruals (Jaffe, 1974). McGee and Block (2014) and Ronen (1977) argued that in an environment that is regulated that seeks to restrict insider trades, there will be a restraint on behalf of executive managers to disclose information that will improve the proper allocation of information. In an alternative fashion, regulatory measures that restricts insider trades will give executive managers the incentive to curb disclosures to include earnings quality in such a manner that will make them privy to privileged information that they can trade

upon. However, if insider trading regulations is missing, the executive manager will have no personal incentives that will help limit the flow of information because in this situation, his trading is not restricted (McGee & Block, 2014).

A large amount of research based on insider trading provides a series of results that serve as a basis for this research study. These research studies can be generally classified into two broad categories. The first one is based on the relationship between insider trading patterns and the properties of EM, and second one is based on the relationship between insider trading patterns, earnings news, as well as market benchmarks. Included in the research studies that investigated the relationship that exist between insider trading patterns and the properties of EM are the studies carried out by Beneish and Vargus (2002), Blair (2016), Brisker et al. (2016), and Garcia et al. (2017). They reported in their studies that corporations that have the tendency to exhibit abnormal insider selling activities may have accruals that are less persistent, while abnormal insider buying activities have an opposite effect. Their studies concluded that such opportunistic EM will be successful in misleading the public as well as investors because insider trading strategies that factors the magnitude of accruals and direction of insider sales will generate abnormal profits ranging from 15% to 22%. Beneish and Vargus indicated that insider trading by executive management is informative of the earnings quality of the firm. They specifically argued that the relationship that exist between current earnings and future earnings is more or less when it is accompanied by insider buying or selling; their findings also showed that investors price all income-

increasing accruals as if they are of high quality. Their research study also provided evidence that the low persistence of earnings during periods of insider sales is partly attributable to EM (Beneish & Vargus, 2002).

One of the requirements of the SEC is that when trading is done by insiders, it should be reported to the SEC in the 10th day of the following month. However, not all trading qualifies for 10th day reporting disclosures and those are the trades that need to be reported in Form 5. Brochet (2010), Cheng et al. (2007), and Chen et al. (2013) argued that delayed insider trade disclosures through Form 5 filings give good information with respect to future earnings, and that such trades can predict future bad news where subsequent filings are met with significantly negative returns. Insider trading sales that qualify for Form 5 filing disclosure are typically not required to be disclosed in the following month. Rather, they are required to be disclosed at the end of the fiscal year; this requirement has helped in providing a useful place that can be used to observe any managerial trading behavior in the absence of mandatory disclosures regarding such trades. Chen et al. provided proof that executive managers will seize the opportunity to trade under Form 5 filings. This finding contrasts with Form 4 filings, as these filings are more associated with future declines in firm performance. After the Form 5 sales are disclosed at the end of the fiscal year, shareholders react negatively, which is an indication that at most, some managers utilize Form 5 filings in the dispensing of shares along with the anticipation of future declines in performance. These research findings are of interest to this study because they show that if managers can conceal their trading, their

trading patterns have the propensity to generate abnormal profits. Thus, this would make it possible for a manager to be able to have the ability to predict future declines in firms' performance, and if this is allowed (for instance, using Form 5 filings), trading would be able to generate profits at the expense of shareholders.

Insider Trading and Earnings Announcements

Other researchers investigated how managers use privileged information to their benefits (Cheng et al., 2007; Chen et al., 2013; Chowdhury et al., 2017; Hugon & Lee 2016; Ke et al., 2003) use their studies to investigate managers' ability to utilize privileged information about future corporate earnings to their benefit. (Ke et al., 2003) where the ones that noted that insiders are privy to inside information, and use that to trade upon forthcoming bad earnings news. In their research study, they did an analysis on the patterns of insider trading during quarters when there is a lapse in a string of consecutive earnings increases. The analysis made on the firms that was investigated indicated that insiders don't trade in the one or two quarters preceding the break in earnings. The assumption is that managers are doing this to maintain the appearance that will show that insiders are not taking advantage of non-public privileged information. However, they noted that there is a rise in the frequency of insider selling in the quarters before that.

In a similar fashion but different direction, Piotroski and Roulstone (2004, 2005) sampled different firms utilizing different methodology. Theirs studies also found similar insider trading patterns where insiders traded upon forthcoming decreases in cash flow.

These research studies indicate managers have access to privileged information about future earnings of the corporations. With this type of ability to predict the performance of the firm into the future, whether it is in future earnings or future cash flows, they have the opportunity to time insider trading transactions in a strategic manner tilted in to their benefit. Therefore, in this study, it was of pertinent interest to investigate if the privileged information that is available to managers contains any value-relevant information about the corporations' discretionary accruals, as well as if insider trades are related to the magnitude and incidence of such accruals. It would also be good to know if such insider trades are predictive of future declines in corporate earnings.

Other researchers investigated the relationship between insider trading patterns, and earnings news, a couple of important studies will serve as a basis for this dissertation (Agrawal & Cooper, 2015; Beneish & Vargus 2002; Cziraki et al., 2016; McVay et al., 2006; Richardson et al., 2004). These previous researchers noted that corporations walk down forecasts to precede equity issuances and insider selling. The assumption was that forecasts that are issued early in the forecast horizon are more optimistic than forecasts that are issued closer to the announcement date. They also argued managers can perceive that a positive earnings surprise is beneficial to them. This is the notion that even in a market with complete information there should be no difference between guiding forecasts downward or having a negative earnings surprise. Another argument that was made is based on a test that was conducted with a sample of over 500 firms that have been involved in accounting scandals with earnings-decreasing restatement and non-

restating firms showed that managers who sell stock while earnings are misstated potentially committed two crimes, earnings manipulation and insider trading (Agrawal & Cooper, 2015). These studies are of importance because they indicate that managers understand the importance of meeting or beating their earnings benchmarks on firm stock price performance through insider trades. Even if meeting an earnings forecast includes the lowering of market expectations, managers seem to prefer that outcome over missing an earnings benchmark in periods where they plan to sell their stocks (Agrawal & Cooper 2015).

Still other researchers have carried out studies that finds that insider trading is not associated with the magnitude of the earnings forecast errors. Researchers (Ali, 2017; Dargenidou et al., 2017; Hirshleifer & Usman, 2016; Hugon & Lee, 2016; Milian, 2016; Sivakumar & Waymire 1994) argued that their studies find insider trading transactions are more focused in the direction of the unexpected earnings news. In all the studies carried out, there is a consensus in their results which indicated that post-announcement insider trades do generate abnormal returns. However, some of the studies did not investigate the issue of earnings quality during periods of insider trades. Cheng and Leung (2008), Choi (2017), and Sivakumar and Waymire (1994) were able to provide documentation indicating a significant relationship between insider trading and one-two- and three-year ahead earnings changes as well as future analyst forecast revisions. Their research findings suggested that if insider trades are tilted toward the direction of forecast error, then it therefore means that insider trades are consistent with having private value-

relevant information. However, if insider trades are tilted in the opposite direction to the forecast error, the assumption is that insider trading will benefit from security mispricing. These studies are also of importance for this dissertation for a number of reasons. First being that the studies confirm the importance of meeting or beating earnings benchmark used as a measure of firm performance. Secondly, executive managers will rather prefer to meet or beat an earnings benchmark while lowering a corporation's performance expectations whenever they plan to sell their stock, and finally, based on the findings, the direction of earnings surprises is correlated with the direction of insider trades.

The above research studies explored investigated some of the relationship that exist between earnings news, earnings benchmarks, and insider trading patterns and provided proof that managers are privy to privileged information regarding corporate earnings news. These research studies also indicated that managers do have the capacity to be able to predict future earnings. The findings also suggested that managers also understand the importance of meeting or exceeding earnings benchmarks when they decide to trade their shares. As some of the past research studies have been able to show that a relationship exists between earnings benchmarks and insider trading patterns, this study will attempt to investigate whether the extent to which managers beat the earnings benchmark is related to their insider trading intensity, as well as whether managers are actively manipulating earnings to exceed earnings benchmark so that they will be able to sell their shares.

Looking at the stream of research carried out in insider trading, this dissertation study is related to other research studies regarding earnings quality issues and how they are related to insider trading. First, Beneish et al. (2012), Cheng and Warfield (2005), Dargenidou et al. (2017), and McVay et al. (2006) documented corporations whose managers sell stock have an increased incidence of just meeting or exceeding the consensus forecast. The researchers also noted in their studies that managers that have plans to sell their security holdings are the most likely to meet or exceed the earnings benchmark. Their research findings also indicated that managers are more likely to manipulate their working capital accounts to achieve the benchmark. Second, prior researchers (Cheng & Warfield, 2005; Cheng & Lo, 2006; Chowdhury et al., 2017; Garcia et al., 2017; Sawicki & Shrestha, 2008, 2014) in their respective studies found a link between executive compensation and future insider trading and they argued that this link is arbitrated by earnings by EM. Their results also showed that managers with high levels of stock compensation are more likely to record positive accruals, higher incidences of meeting or exceeding earnings forecasts, and in turn will have an increased level of subsequent insider trading. Third, prior researchers (Beneish & Vargus, 2002; Beneish et al., 2004, 2012; Bergstresser & Philippon, 2006; Dargenidou et al., 2017; Garcia et al., 2017; Sawicki & Shrestha, 2008) have investigated the association between EM and insider trading. Beneish et al. tested a sample of 462 firms that have experienced technical default in the period 1983-1997 a period that preceded poor corporate performance. Their findings are contrary to the other research studies mentioned above

from a different perspective. They contend that the find no support for the pump and dump hypotheses that earnings are being managed before managers sell their equity. Their study also did not find a positive relationship between abnormal accruals and insider trading activity. Among the sample of corporations tested, their findings also showed that managers manage earnings upwards after periods of insider selling, this is an observation that they attribute to managers' incentives to minimize litigation, reputation, and employment losses.

The prior researchers examined the broad issue of EM, earnings quality, and insider trades. McVay et al. (2006) investigated the distributional properties of earnings. These researchers did not use the Jones model (1991), McVay et al. did not investigate the effects of EM on future performance, the researchers did not investigate the relationship between the forecast error and magnitude of insider trading, and they did not investigate the role of option compensation on such actions. Cheng and Warfield (2005) did not examine the effects of EM on future performance, they did not investigate the relationship between the forecast error and magnitude of insider trading, and they did not investigate the role of option compensation and how it relates to earnings manipulation. Beneish et al. (2004, 2012) investigated the problems of earnings quality and insider trading using a special sample of corporations that have faced high litigation. With the subsample tested, their findings did not indicate the presence of EM during periods of insider trades. The findings of Beneish et al. are also in contrast with the findings of Cheng and Warfield as well as McVay et al. However, the importance of these research

studies lies in the premise that managers do have a clear understanding of the implication of EM in high litigation industries. This was an indication that further investigation was warranted in the issue of EM and insider trading.

Compensation Structure and Incentives

This study would not be complete without investigating the relationship that exists among the structure of compensation for corporate executives, the performance of the corporation with respect to EM and insider trading patterns. Specifically, I investigated if stock option holdings by executives would influence an increased insider selling by insiders based on the compensation structure of the firm and if there was a managerial incentive associated to managing earnings upward. This part of the study attempted to examine important research studies carried out in executive compensation and the effects of its incentive on executive managers. The discussion of executive compensation would not be complete without the issue of agency cost, separation, and control. Jensen and Meckling (1976) were the first to investigate agency costs and aligned it to the problem of separation and control in present day corporation. Since then, more researchers have examined the association between executive compensation structure as well as the incentives around it and the actions created as a result.

Early research studies regarding compensation structures were based on the premise of if the current compensation structures are in uniformity with agency theory forecast (Garen, 1994; Jensen & Murphy, 1990). Garen (1994) argued that the literature on executive compensation has failed to identify a method of executive compensation on

which to base as well as test the hypotheses regarding its determinants. Rather, he investigated the measure and structure of executive compensation utilizing a simple principal-agent model to ascertain how well it can explain the variations in CEO incentive pay and salaries. His research findings are consistent with past studies (e.g., Jensen & Murphy, 1990) that executive compensation is structured to trade off incentives for insurance and that the pay-for performance sensitivity is too low. This contrasts with forecast of the principal-agent theory. The research study also contends that statistical importance for some of the effects are relatively weak, even though the magnitudes are huge. Garen (1994) argued that there is very little proof of the use of relative performance pay. However, the researcher contended that although a puzzling question still looms, the principal-agent considerations still have a huge role in setting executive compensation.

With the amount of investigations conducted on firms' compensation structure, as well as the type of findings from such studies and the vagueness on the optimal structure of executive compensation, this gave rise to more studies being conducted on this topic. All in the name of trying to address the problems surrounding executive pay in firms as it has become a problem that is also seen as associated to EM and insider trading. Researchers (Devers & Sanders, 2016; Fich & White, 2003; Halioui et al., 2016; Hsieh et al., 2016; Oyer & Schaefer, 2003; Pelger & Schäfer, 2017; Yermack, 2004) have contended that there is no agreement in the literature that clearly defines what constitutes an optimal compensation structure of an executive, regardless of the nature of the compensation, which includes stock options, stock, restricted stock, cash, bonus, as well

as where most corporations engages a mixture of the listed compensation in an ad hoc basis.

Other research studies on compensation have also investigated the relationship that exist between compensation structure and real actions taken by executives. Some of these research studies have dedicated time to investigate if compensation is associated with the amount of risk levels taken by executives that are on same page with shareholder demands. This behavior of risk taking is noticed when there is consideration by executives trying to merge with or acquire other corporations as contended by Burns et al. (2017) and Datta et al. (2001). In the areas of expenditures related to research and development, Cheng (2004) investigated to see if committee on compensation seek to avert opportunistic decrease in research and development expenditure. Cheng's hypotheses contended that research and development funding are positively related with changes in CEO compensation in two ways: when the CEO nears retirement and when the corporation is faced with a decrease in earnings and losses.

Other researchers have investigated what determines the compensation structure of corporations with respect to shareholder composition as well as the presence of institutional investors (Almazan et al., 2005; Coleman, 2016; Jongjaroenkamol & Laux, 2017). They used a stylized model to investigate the effects of institutional monitoring on executive compensation. The model utilized was able to predict that the level of compensation is enhanced when there is influence on managers' pay-for-performance sensitivity when institutions have lower implied costs of monitoring. However, they

argued that these effects are impaired when the firm-specific cost of monitoring is high. Their findings are consistent with these implications, in a broad manner. Thus, suggesting that independent investment advisors and investment company managers do have advantages in monitoring firms' management when it comes to compensation.

Other researchers have investigated the association between executive compensation structure and the patterns of information disclosure. One of the focus on this research is based on disclosure of information around option awards (Aboody & Kasznik, 2000). Aboody and Kasznik (2000) tested to determine whether corporations' CEOs can manage the timing of their voluntary disclosures around stock option awards. They speculated that executive CEOs can manage the expectations of investors' around award dates and they achieve this by delaying good news and instead put forth bad news. The researchers sampled 572 corporations that have a fixed award schedules to look more than 2,039 CEO options awards. The researchers were able to document the changes in share prices as well as analyst earnings forecasts in the period of option awards that is consistent with their speculation. They also provided a compelling evidence that is more direct based on EM forecast that is issued before the award dates. Their results are of the assumption that CEOs have the ability to make opportunistic disclosure decisions on a voluntary basis that will maximize their stock option compensation (Aboody & Kasznik, 2000).

The manipulation of information around stock option re-pricing is another area that was investigated by (Callaghan et al., 2016; Carter & Lynch, 2001; Nagar et al.,

2003). They contend that share and options compensation are related to increased voluntary disclosure by corporation to reduce agency issues. Their investigation included a comparison of corporations that re-prices management's stock options in 1998 to a sample of controlled corporations with out-of-the-money options in 1998 that do not engage in re-pricing. The results of their study showed that there is the likelihood of re-pricing increasing for young, high technology corporations and corporations whose stock options are more out-of-the-money. Furthermore, Callaghan et al. (2016), Carter and Lynch (2001), and Nagar et al. (2003) were able to provide evidence showing that corporations' will re-price to respond to poor firm-specific, and not poor industry performance. However, the result of their testing could not provide any proof that re-pricing had any association that is related to agency problems. Additionally, they contend that finding from their investigation is consistent with corporate re-pricing of stock options that is used to restore incentive effects as well as to discourage executive managers that are engaged in a competitive labor markets from going to work for other corporations (Callaghan et al., 2016; Carter & Lynch, 2001; Nagar et al., 2003).

I also examined whether compensation structure through options award, buyback, or backdating is influenced by insider trading, thus resulting in EM. Stock options have been a standard form of compensation for the past three decades, and as time passes, it has become one of the most popular means of compensation tool next to cash, bonus, and shares. As it stands in modern day businesses, more than 50% of total compensation that is given to most top executive management comes in the form of options. Employees of

firms that are not high up in the executive ladder have also started getting compensated with stocks because study shows that about 40% of all big U.S. corporations provides stock options to more than 50% of their employees (Hall & Knox, 2002).

Since the last post-scandal years, a variety of researchers have investigated the effects of option compensation and EM (Cheng & Warfield, 2002; Chen et al., 2017; Geertsema et al., 2016; Jongjaroenkamol & Laux, 2017; Qi et al., 2014). These researchers investigated if there is a link between future insider trading and executive compensation. They made a compelling assertion that future insider trading is effectuated by EM. Their studies provided evidence that corporate managers that have an increased level of stock compensation are more likely to document positive accruals, higher occurrences of meeting or surpassing forecasts, and in return have an increased level of subsequent insider trading. The nature of their assertion is an easy and very straightforward; because it shows that the higher the equity compensation of the executive, the more likely the executive is to manage earnings, and thus the higher the vastness of insider sales. Additionally, the proof providing that association between EM and stock compensation is quite fascinating because the intended purpose of stock compensation was to situate the motivation of managers with those of shareholders. However, Cheng and Warfield (2002); Chen et al. (2017); Geertsema, Lont et al. (2016); and Jongjaroenkamol and Laux (2017) indicated that executives with increased level of stock or option holdings are more likely to engage in the manipulation of corporate earnings in their interest to increase their personal wealth at the detriment of shareholders

of record. This is in stark contrast to the intended reason the incentives of stock compensation were introduced in the first place.

The prior research findings are of interest to this study because there is an indication that executives engage in EM when they see that they are close to the market standard, as this will make it possible for executives to meet or beat the market by slight manipulation of earnings. These research findings are also relevant to the research study because they investigated the association between EM, and subsequent insider trading patterns. If EM is a tool that is used in corporation to meet industry standard and performance, and thus increase executive earnings, then it will be of interest to examine whether engaging in insider trading based on information at the disposal of executive prompts executives to trade their holding to benefit themselves when stock prices appreciates.

Summary and Conclusions

In conclusion, in this chapter I included a variety of avenues related to this research that call for further investigation. First, it is evident from the literature that corporations engage in EM using either AEM, REM or classification shifting. These methods of earning are not illegal and are not prohibited by GAAP. It is also evident from the literature that corporations engage in insider trading to either meet or beat market standards to experience higher stock returns for the current and following periods either in the interest of the firm or their personal interest. For this reason, in the present study I investigated whether there is an association between EM and insider trading. The

literature shows that managers engage in the use of REM and classification shifting to manage earnings instead of AEM that is recommended by GAAP since the enactment of the SOX act. Finally, since there is evidence to show that the bigger the equity compensation, the more likely is the incidence of earnings manipulations or fraud, I also investigated whether executive managers enrich themselves through insider trading after earnings manipulation decisions. Earnings management is a large portion of the existing accounting literature (Sawicki & Shrestha, 2014). Sawicki and Shrestha (2014) argued that a limited number of researchers have analyzed the incentives associated with EM when it comes to insider trading patterns and the motives driving them. This dissertation study was intended to fill this gap in the literature.

Chapter 3: Research Method

Introduction

Evidence from SEC investigations and other regulators show that corporate scandals linked to insider trading and EM have become more prevalent than in previous years, leading to a record number of corporate bankruptcies, indictments, and prison sentences (Beasley et al., 1999; Rezaee, 2005; Tillman, 2009). The purpose of this quantitative, non-experimental correlational study was to examine whether there is an association between insider trading patterns and EM citations for a randomly selected sample of publicly traded companies. In this chapter, I explain the methodology used to evaluate the association between insider trading patterns and EM citations. First, I introduce the research design and rationale. Next, I describe the population, sampling, and sampling procedures. I then present the procedures for recruitment, participation, and data collection. I also present the instrumentation, operationalization of constructs, and a data analysis plan. Finally, I discuss threats to validity as well as ethical procedures.

Research Design and Rationale

In this study, I examined the relationship between the continuous dependent variable of number of EM citations and the dichotomous independent variable of insider trading using a quantitative methodology and a non-experimental, correlational design. Through quantitative approaches, researchers use numerically measurable variables to make statistical inferences about a population or a relationship (Field, 2013). This was an appropriate approach, as I sought to use archival, measurable data rather than an in-depth

qualitative interview process. Because I used archival data, I could not experimentally manipulate any variables. As such, the non-experimental, correlational design was most appropriate (Field, 2013). Additionally, various authors and researchers (Agrawal & Cooper, 2015, 2017; Ahearne, Boichuk, Chapman, & Steenburgh, 2016; Alldredge & Cicero, 2015; Chowdhury, Mollah, & Al Farooque, 2017; Degiannakis, Giannopoulos, Ibrahim, & Rozic, 2017; Olsen & Zaman, 2013; Sawicki & Shrestha, 2014) have used a non-experimental, correlational design to study EM and insider trading in varying capacities. As such, my research design was consistent with past research design in this field needed to advance knowledge in EM and insider trading literature.

The qualitative or mixed methods designs would not have been appropriate for this study. A qualitative study would not have allowed for statistically verifiable hypotheses testing. Additionally, due to the sensitive nature of the topic, it is unlikely potential participants would feel comfortable participating in a qualitative study; those with knowledge of higher-level corporate operations would likely be unavailable or unwilling to be interviewed. As I focused on the use of archival data, no resource constraints existed.

With this correlational, non-experimental design, I examined data within the period beginning with January 1, 2002 and ending with December 31, 2012 for randomly selected firms that are listed on the New York stock exchange to see if there was an association between EM and insider trading. After the accounting scandal of 2002 that led to the passage of the SOX Act, research (e.g., Siegel, Franz, & O'Shaughnessy, 2010)

centered on time periods pre-SOX Act and leading up to 2002, when the law was passed. However, even with the SOX Act in place, firms engage in insider trades or EM using the same method, through classification shifting, or changing their method of managing their earnings (Agrawal & Cooper, 2015; Chen, Lee, & Chou, 2015; Olsen & Zaman, 2013; Sawicki & Shrestha, 2014).

I used publicly available archival data. There are numerous benefits associated with using available archival data. It is readily available, numerous, may be used in a variety of research contexts, requires less resource expenditure, and may be used to analyze historical trends rather than current trends (Church, 2002; Punch, 2013; Singleton, Straits, & Straits, 1993).

Methodology

In this section, I describe the procedures that were used to carry out the study. I present the population, sampling, and sampling procedures first. Next, I present the procedures for recruitment, participation, and data collection. I describe the instrumentation and operationalize the variables, and then I present the data analysis plan.

Population

The population for this research study comprised publicly traded firms that are registered on the NYSE and filed their financial reports with the SEC between January 1, 2002 and December 31, 2012. I examined all earnings and insider trading transactions reported by the 77 firms that were randomly selected in the U.S. SEC website, litigation releases, administrative proceedings, and the Accounting and Auditing Enforcement

section of the SEC document archives with data covering a 10-year period from January 1, 2002, to December 31, 2012 to see whether there was a relationship between insider trading and earnings manipulation controlling for firm size. I examined proxy statements as well as all insider transactions for all the firms for the period covered.

Sampling and Sampling Procedures

Simple random sampling was used to select a sample. In simple random sampling, individuals (in this case, corporations) have an equal chance of being randomly selected from the population (Acharya, Prakash, Saxena, & Nigam, 2013). This type of sampling is beneficial, as it removes potential sources of bias, thus improving the validity of the study (Acharya et al., 2013). I drew the sample by first collecting a listing of corporation names active during January 1, 2002 to December 31, 2012 in an Excel spreadsheet. I then used a random number generating website to randomly generate a series of numbers. I used the randomly generated numbers to select the sample from the Excel spreadsheet. I collected information involving income, balance sheets, statements of cash flows, statements of retained earnings, and reports related to EM and insider trading from the publicly available Edgar database of the SEC, Yahoo Finance, and S&P 500.

I collected relevant information from January 1, 2002 to December 31, 2012. Although research (Siegel et al., 2010) has been centered on times pre-SOX Act and leading up to 2002 when the law was passed, little research has been done on the time after the SOX act. The sampling frame involved firms that were publicly traded and the range significantly in size. The sample only included firms that were required to report

their earnings to the SEC. No privately controlled or non-corporate firms were included in the study.

Sample size. I used G*Power to compute a sample size for the proposed multiple linear regression (see Faul, Erdfelder, Lang, & Buchner, 2008). Cohen (1986) recommended that a medium effect size, a power of .80, and an alpha of .05 be used in power analyses. For a linear regression with these parameters and three predictors, a sample of 77 companies was required (Faul et al., 2008).

Procedures for Recruitment, Participation, and Data Collection

I collected archival data from publicly available information found in the online Edgar database of the SEC, Yahoo Finance website, S&P 500 website, and online Morningstar database. I gathered financial statements (balance sheets, income statements, and cash flow statements) of corporations from the original filings of Forms 10-Q, 10-K, 10-K405, and 10KSB from January 1, 2002 to December 31, 2012. I also looked at the corporate governance factors to collect demographic data such as the percentage of insiders that are seated on the board of the firm, size of the firm, percentage of female executives as opposed to male executive, industry that the firms are in and the sector of the business. This information was publicly available, so I did not need permission to access the information.

Instrumentation and Operationalization of Constructs

As I used publicly available archival data, I did not use a classic research instrumentation. Instead, I collected the financial statements (income statements,

statement of earnings, balance sheets, and statement of cash flow) the original filings of forms 10-K, 10-K405, and 10-KSB. I collected these from the annual financial statements in the Edgar database of the SEC. I pulled information on the corporate governance factors from the sample of firms. I looked at the percentage of insiders on the board of directors. I collected data for the sample corporations from the Morningstar database. I pulled information from the proxy statements on form DEF 14A from the previously listed websites. I collected data of firms with no EM citation from the Yahoo database. I also collected data from the finance page of the S&P 500 website. For instance, I collected data from proxy statements on form DEF 14A from the listed websites to look at the corporate governance factors such as the percentage of insiders on the board of directors.

The SEC act of 1934 requires all corporations that are publicly listed to issue annual reports after the performance of an external public audit, including internal control procedures. This helps to ensure that the information that is released to the public is accurate and reliable to users. Morning Star, S&P and Yahoo Finance are well known and recognized industry leaders that are registered with the United States and accepted by businesses for storage of complete financial information.

Operationalization of constructs. I randomly sampled selected firms and analyze their associated data using established metrics that have been identified through prior research as indicators of EM, insider trading, and fraudulent financial reporting. The

objective of this study was to see what relationship existed between insider trading pattern and number of EM citations.

Number of earnings management citations. This was a continuous dependent variable measuring the number of EM citations a company had received between January 1, 2002 and December 31, 2012. I measured it continuously, meaning that the exact number of citations, starting from 0, was recorded.

Patterns of insider trading. This was a categorical independent variable measuring the patterns used to manage earnings. I measured it using stocks option sales/purchase, accounts receivables, inventory, total sales, compensation structure, total assets, stock compensation, stock options buyback. The categories were coded as 0 = *no insider trading*, 1 = *insider trading present*.

Insiders on board. This was a continuous demographic variable measuring how many insiders were seated on the board of the firm, measured as a percentage of outside board members.

Firm size. This was a categorical demographic variable measuring the size of the firm. It was categorized into *small*, *medium*, and *large* corporations.

Percentage of female executives. This was a continuous demographic variable measuring the percentage of female executives as opposed to male executives.

Industry. This was a categorical demographic variable measuring the type of industry the firm is in. Categories consisted of investment, real estate, retail firms, oil firms, hedge funds firms, and insurance firms.

Data Analysis Plan

I used a Microsoft Excel spreadsheet to organize the data. I then imported the data into IBM's SPSS for analysis. I calculated descriptive statistics to describe the sample. I calculated frequencies, percentages, means, and standard deviations as appropriate.

To answer the research question of what association exists between number of earnings management citations and patterns of insider trading in publicly trading firms, controlling for firm size, I conducted a multiple linear regression. This is the appropriate analysis to perform when seeking to assess the relationship between a set of continuous or categorical independent variables or covariates and a continuous dependent variable (Field, 2013). The dependent variable for this analysis was number of EM citations. The independent variable was patterns of insider trading, coded as 0 = *no insider trading*, 1 = *insider trading present*. I added the categorical variable of firm size as a covariate, dummy coded into *medium* and *large*, with *small* as the reference category.

I tested the assumptions of the multiple linear regression first. These included normality, homoscedasticity, and absence of multicollinearity. I assessed normality using a normal P-P plot. If the data points followed the diagonal normality line without extreme deviation, the assumption of normality was met (Field, 2013). I assessed homoscedasticity using a scatterplot of the residuals. If the data were generally equally distributed with no cone-shaped pattern, the assumption of homoscedasticity was met (see Field, 2013). I assessed absence of multicollinearity through variance inflation factor

(VIF) values. VIF values below 10 indicated that the assumption was met (see Stevens, 2009).

I evaluated the F test at the $p = .05$ level to determine the significance of the overall model (Tabachnick & Fidell, 2013). I interpreted the R^2 value as the proportion of variance explained by the regression (Field, 2013). If the overall model was significant, I would assess the individual predictors for that variable to determine what individual predictors significantly predict variability in the dependent variable. If the individual predictor of EM citations was significant at the $p = .05$ level, then the null hypotheses was rejected.

Threats to Validity

The validity of this research supports the trustworthiness of my statistical arguments. I considered external, internal, and construct validity. The concept of external validity is the extent to which the results of a study are generalizable to the wider population sampled from (Dross, 2011). Threats to external validity are attributable to generalizing to different or inappropriate populations (Dross, 2011). As such, I made no generalizations beyond the study population.

Internal validity refers to how well causal conclusions from the analyses are made, based on the experimental design (Drost, 2011). I used a non-experimental design in this research, meaning that there was no causal relationship assumed. As such, threats to internal validity, such as maturation or mortality, were not applicable.

Construct validity refers to how appropriately a construct was operationalized (i.e., does it measure what it says it measures; Drost, 2011). In this study, construct validity was aided by the fact that other researchers have used the same instrument to investigate similar or the same type of questions or reactions within other business sectors that are related to this study (e.g., Alldredge & Cicero, 2015; Chen, Y-C., Lee, & Chou, 2015).

Ethical Procedures

Prior to any data collection or other procedures, I gained Walden Institutional Review Board (IRB) approval 04-26-18-0148650. I collected the data for this research study from publicly available financial reports submitted to the SEC. Thus, no human participants were involved in this research study. Additionally, no institutional permissions were necessary. I did not collect any individual's information, nor did I release or associate company names with results. I do not foresee any ethical concerns associated with the research process due to the archival nature of the study. I saved all data on a password-protected computer. After 5 years, I will securely wipe the data from the computer.

Summary

I employed a quantitative, non-experimental, correlational research design. I examined randomly selected corporations listed in the NYSE that are required to file a SEC report on a yearly basis between January 1, 2002 to December 31, 2012. I collected data from the 10K, Proxy statements, and cash flow statements of public corporations

that are located in the SEC.gov, Morningstar.com, Yahoo finance and Edgar online databases. I used a multiple linear regression to see if there was an association between corporations' insider trading patterns and EM citations from 2002-2012. In Chapter 4, I detail the results of the analyses described in this chapter. In Chapter 5, I discuss the results.

Chapter 4: Results

There is a widespread problem of corporate accounting fraud increasingly manifesting as EM (Lin & Wu, 2015). Corporate scandals have brought down leading firms like Enron, HealthSouth, Tyco, and WorldCom, and have resulted in decreased trust amongst investors. Financial misconduct such as this is associated with large stock price decline, SEC inquiry, top executive change or turnover, insider trading, and bankruptcy filings (Agrawal & Cooper, 2015). As such, corporate financial-reporting practices have been put under scrutiny.

This study addressed the problem that association between insider trading patterns and EM citations among publicly traded companies was not well understood. Agarwal and Singh (2006) suggested the likelihood of a connection between insider trading and EM when it comes to the dissemination of asymmetric information. Accordingly, the purpose of this quantitative, non-experimental study was to examine the association, if any, between insider trading patterns and EM citations for a randomly selected sample of publicly traded companies.

Through this quantitative research study, I examined insider trading patterns and EM citations after the SOX Act of 2002 until 2012. The theoretical framework for this study was based on the accounting and auditing theories of Arens et al. (2014), Glover et al. (2014), Fruhan (1979), and Haugen (2001), as well as financial theories of portfolio performance. The research question and hypotheses were as follows:

Research Question: What association exists between number of earnings management citations and patterns of insider trading in publicly trading firms, controlling for firm size?

H_0 : There is no significant association between number of earnings management citations and patterns of insider trading in the publicly trading firms after controlling for firm size.

H_a : There is a significant association between number of earnings management citations and patterns of insider trading in the publicly traded firms after controlling for firm size.

In this chapter, I present the results of the procedures and analysis described in Chapter 3. First, I describe the data collection process. Then, I report the descriptive statistics. Next, I report the results of the hypotheses testing. I conclude the chapter with a summary.

Data Collection

I collected data covering January 1, 2002 to December 31, 2012 from a series of publicly available financial sources. I started by using ABI/Inform Global that is available through the Walden University library and Google scholar to access any articles and peer-reviewed journals related to EM and insider trading during the 11-year window under consideration. I examined each 8K, 10Q, 10K, DEF 14A, proxy statement, as well as insider transaction for each of the 77 firms that were randomly selected to determine whether a significant relationship existed between insider trading patterns and EM after

controlling for firm size. I then pulled the litigation releases for all 77 firms to determine if all citations were due to insider trading or not due to insider trading. I then uploaded the data to SPSS for management and analysis. As I accessed and used archival data, there are no recruitment or response rates to report.

I sampled a total of 77 firms out of 400 possible firms based on a G*Power calculation (see Faul et al., 2014). Nine of these firms were foreign firms that trade on the NYSE and make reports to the NYSE. I excluded those from the sample and sampled an additional nine firms that were not foreign. This resulted in a total sample of 77 firms. I compiled the archival data in an Excel spreadsheet and then uploaded it into SPSS.

Data Management

I assessed the data for missing cases, and there were no cases with missing data. I then checked the continuous number of EM citations variable for outliers using Tabachnick and Fidell's (2013) process, which involves calculating standardized values (Z scores) associated with the continuous variable of interest and then visually examining the standardized values for high or low values. Standardized scores less than -3.29 or greater than 3.29 are considered outlying values (Tabachnick & Fidell, 2013). After examining the standardized scores associated with EM citations, there were no scores that qualified as an outlier. Thus, I retained the full sample of 77 firms.

Descriptive Statistics

After assessing the data, I calculated descriptive statistics to describe the sample of firms. Descriptive statistics include frequencies and percentages for categorical

variables and means and standard deviations for continuous variables. The majority of firms sampled had patterns of insider trading present (58.44%). Most firms were large or medium (58.44%). The firms represented a large range of industries, but the largest groupings were in consumer services (12.99%), finance (11.69%), and investment (10.39%). The firms had an average of 1.39 ($SD = 1.18$) EM citations. The average percentage of insiders on the board was 46.62% ($SD = 14.38\%$). The average percent of female executives in the firm was 9.96% ($SD = 10.04\%$). I present the full frequencies and percentages in Table 1.

Table 1

Frequencies and Percentages of Company Characteristics

Characteristic	<i>n</i>	%
Patterns of Insider Trading		
Not Present	32	41.56
Present	45	58.44
Firm Size		
Large	22	28.57
Medium	23	29.87
Small	32	41.56
Industry		
Banking	2	2.60
Broadcasting	1	1.30
Business Services	1	1.30
Capital Goods	7	9.09
Capital Management	2	2.60
Communications	1	1.30
Construction	1	1.30
Consumer Services	10	12.99
Cosmetics	1	1.30
Energy	2	2.60
Engineering	1	1.30
Finance	9	11.69
Gold	1	1.30
Health Care	6	7.79
Insurance	2	2.60
Investment	8	10.39
Manufacturing	2	2.60
Newspapers/Magazines	1	1.30
Oil and Gas	4	5.19
Pharmaceuticals	3	3.90
Real estate	5	6.49
Technology	6	7.79
Transportation	1	1.30

Based on firm size, large firms had the most citations on average, although the average number of citations was similar for each size (as shown in Figure 1).

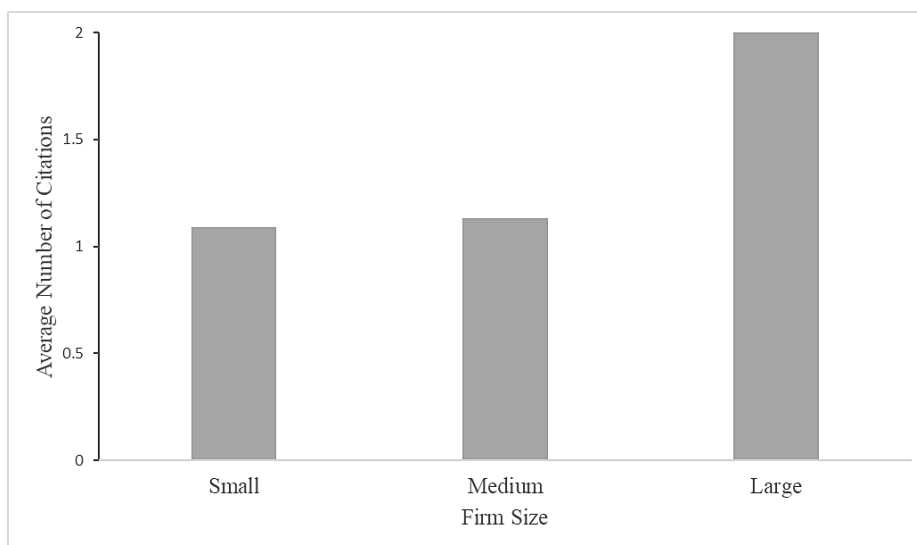


Figure 1. Bar chart of average number of citations by firm size.

Those with patterns of insider trading present had more citations on average than firms that did not, although citations were still present for firms that did not have patterns of insider trading (as shown in Figure 2). Firms in the newspaper and magazine industry had the highest average citations, followed by firms in the pharmaceuticals industry (as shown in Figure 3). Firms in the business services, construction, cosmetics, gold, manufacturing, and transportation industries had the lowest average citations (as also shown in Figure 3).



Figure 2. Bar chart of average number of citations by patterns of insider trading.

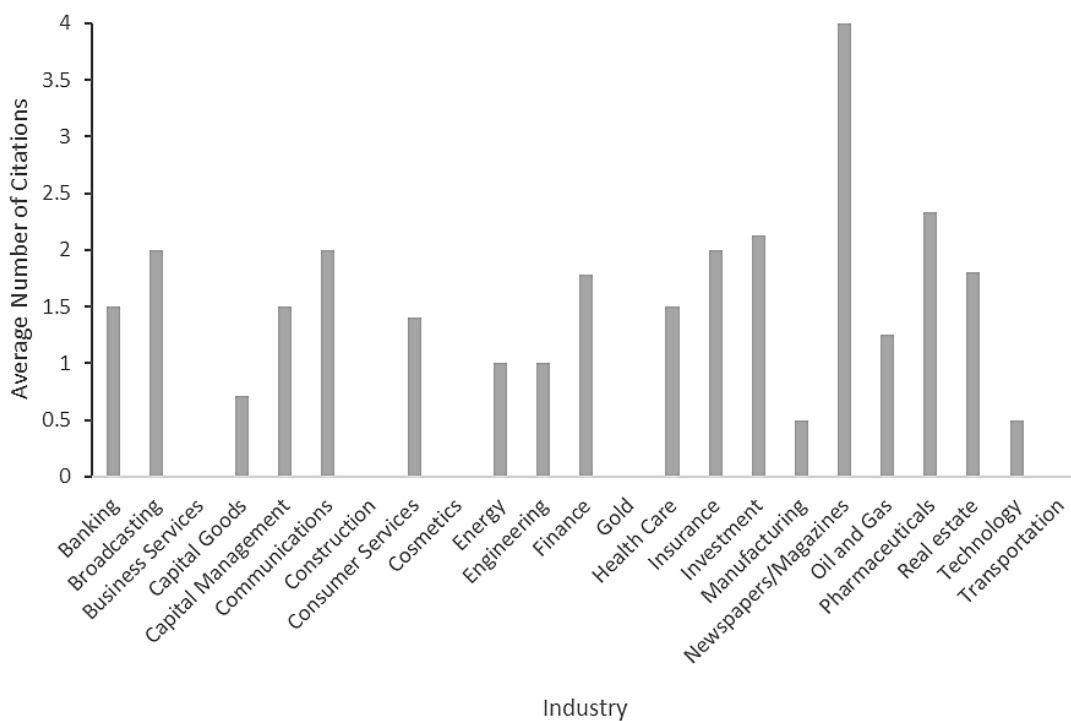


Figure 3. Bar chart of average number of citations by industry.

Medium and large firms had the higher average percentage of female executives than small size firms (as shown in Figure 4). I conducted a one-way analysis of variance (ANOVA) to determine whether these differences were statistically significant. The data met the assumption of equality of variances (Levene's test $p = .966$; see Stevens, 2009) as well as normality (skew and kurtosis levels less than the absolute value of 2.00 and 3.00, respectively; Westfall & Henning, 2013). The ANOVA was significant, $F(2, 74) = 7.70$, $p = .001$, $\eta^2 = .17$, indicating that there was a significant difference in percentage of female executives based on firm size. Table 2 presents the full results of this ANOVA. Post hoc testing using Tukey's correction indicated that this difference only existed between small and large firm sizes (mean difference = 10.00%, $p = .001$). There was no significant difference between small and medium firms, nor between medium and large firms. Table 3 presents the full results of post hoc testing.

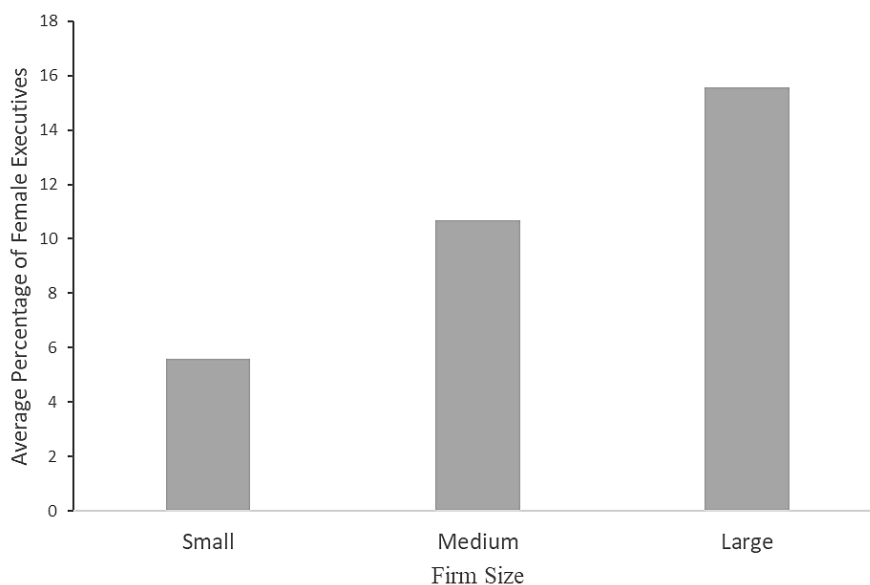


Figure 4. Bar chart of average percentage of female executives by firm size.

Table 2

ANOVA Table for % of Female Executives by Firm Size

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>	η^2
Firm Size	1320.18	2	660.09	7.70	.001	.17
Error	6342.26	74	85.71			
Total	7662.44	76				

Table 3

Tukey's Post Hoc Tests for % of Female Executives by Firm Size

Firm Size (I)	Firm Size (J)	Mean Difference (I-J)	<i>SE</i>	<i>p</i>
Small	Medium	-5.11	2.53	.115
	Large	-10.00	2.56	.001
Medium	Small	5.11	2.53	.115
	Large	-4.89	2.76	.186
Large	Small	10.00	2.56	.001
	Medium	4.89	2.76	.186

Small firms had the lowest average percentage of insiders on the board, while large and medium firms had the higher average percentage of insiders on the board (as shown in Figure 5). I conducted a one-way ANOVA to determine whether these differences were statistically significant. The data met the assumption of equality of variances (Levene's test $p = .446$; see Stevens, 2009). All data met the criteria for normality based on skew and kurtosis levels except for the small level of firm size (Westfall & Henning, 2013). However, the F test used in the ANOVA is robust to violations of normality (Stevens, 2009). The ANOVA was not significant, $F(2, 74) = 0.62$, $p = .539$, $\eta^2 = .02$, indicating that there was not a significant difference in

percentage of insiders based on firm size. Table 4 presents the full results of this ANOVA.

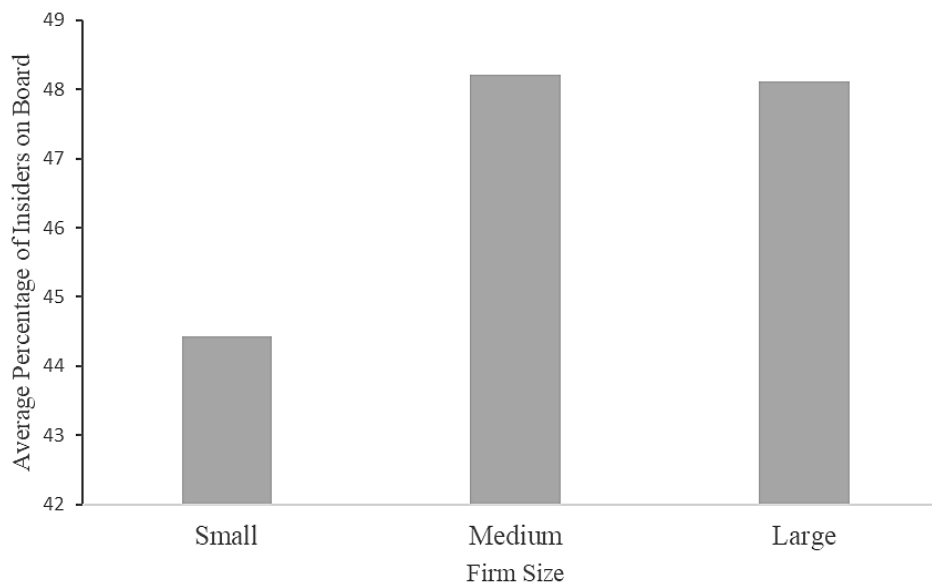


Figure 5. Bar chart of average percentage of insiders on board by firm size.

Table 4

ANOVA Table for % of Insiders on Board by Firm Size

Source	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>	η^2
Firm Size	260.592a	2.00	130.30	0.62	.539	0.02
Error	15452.65	74.00	208.82			
Total	15713.24	76.00				

To justify the inclusion of firm size as a covariate in the regression model, I ran a series of point-biserial correlations between the dummy coded variables of medium and large firm sizes and the number of EM citations. There was a significant relationship between the large category of firm size and number of EM citations ($r = .38, p = .001$), which justifies the inclusion of firm size as a covariate.

Results

To answer the research question, I conducted a multiple linear regression with a dependent variable of number of EM citations. This is the appropriate analysis to conduct when the research aim is to determine the relationship between at least two continuous or categorical predictor variables and a single continuous dependent variable (Tabachnick & Fidell, 2013). The categorical predictor variable of interest was patterns of insider trading, coded as 1 = *present* and 0 = *not present*. The categorical covariate was firm size. As this was a categorical variable with more than two categories, dummy coding was necessary (Field, 2013). Dummy coding involves creating additional binary variables for each category of the categorical variable, where the second category of each new variable is considered the reference category (Field, 2013). I dummy coded firm size into two variables: *large* and *medium*, with *small* as the reference category. This means that each firm size variable (large and medium) was interpreted in terms of their relationship to the dependent variable, as compared to the reference category of small firms.

Prior to interpreting the results of the regression, I assessed the assumptions of normality, homoscedasticity, and absence of multicollinearity. The assumption of normality is that the residuals of the regression are approximately normally distributed, meaning that the data generally follow the ideal normal bell curve (Field, 2013). When normality cannot be assumed, the statistical power of the analysis may be reduced and estimates may not be reliable (Stevens, 2009). The assumption of homoscedasticity is that the residuals of the regression have approximately equal variance (Field, 2013). If this

assumption cannot be assumed, estimates may become biased (Stevens, 2009). The assumption of absence of multicollinearity is that the predictor variables are not too strongly related to one another (Field, 2013). When multicollinearity is present, the statistical model is not able to accurately make predictions (Stevens, 2009).

I assessed normality using a P-P scatterplot of normality. If the points generally follow the normality line, the assumption is met (Stevens, 2009). I present the P-P scatterplot of normality in Figure 6. Although the scatterplot shows some step-like patterning indicative of discrete (i.e., categorical) variables (Stevens, 2009), the data does not deviate strongly from the normality line. I assumed normality.

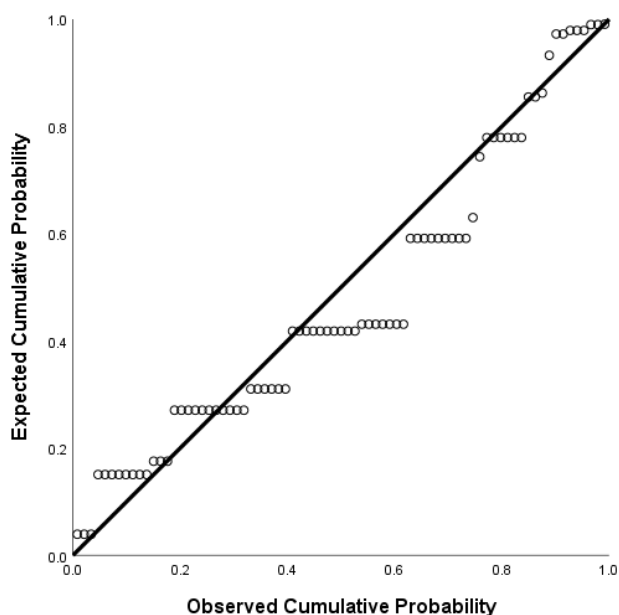


Figure 6. Q-Q scatterplot testing normality.

I evaluated homoscedasticity using a scatterplot of the residuals. The assumption is met if the points appear randomly distributed with no curvature. I present this

scatterplot in Figure 7. The data points are in two groups, indicative of discrete patterning, but do not show any signs of curvature, indicating that the assumption is met.

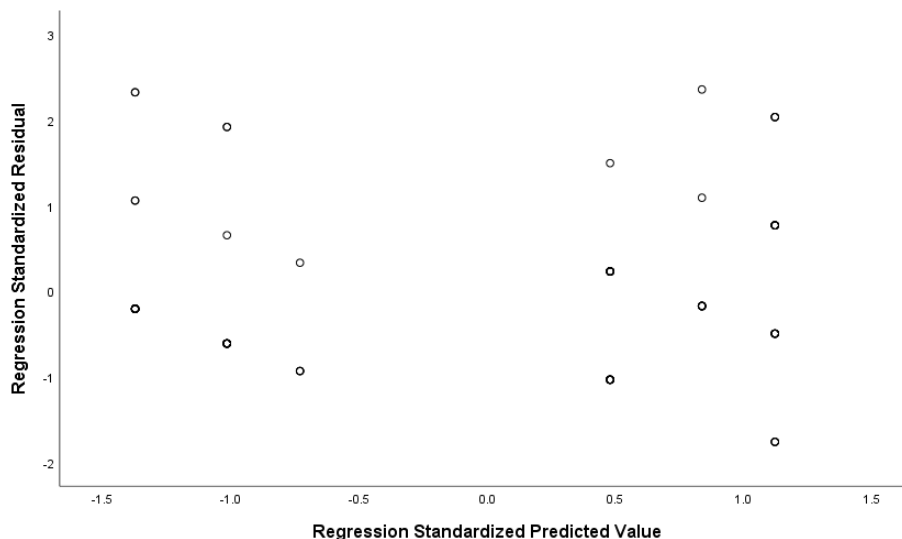


Figure 7. Residuals scatterplot testing homoscedasticity/

I then assessed absence of multicollinearity using VIF values. VIFs should ideally be below 5.00 to indicate absence of multicollinearity (Stevens, 2009). All predictors in the regression model have VIFs less than 5.00. The VIF for patterns of insider trading was 1.12, for medium firm size 1.23, and for large firm size 1.27.

To interpret the results of the linear regression, I first examined the overall regression model (i.e., the linear combination of the predictor variables; Field, 2013) using the F test. Then, I examined the significance of the individual predictors (i.e., the estimate of the individual predictor, holding the other variables constant; Tabachnick & Fidell, 2013). For significant individual predictors, I examined the strength and direction of that relationship using the unstandardized beta coefficient (B).

The results of the overall linear regression model were significant, $F(3,73) = 32.33, p < .001, R^2 = 0.57$. This indicated that approximately 57% of the variance in number of EM citations was explained by patterns of insider trading and firm size. As such, I examined the individual predictors. The large category of firm size was significantly related to number of EM citations, $B = 0.57, p = .013$. This indicated that, on average, a large firm would have 0.57 units more citations than a small firm, according to the unstandardized beta coefficient. Medium sized firms do not predict a change in citations when compared with small firms. Patterns of insider trading was significantly associated with number of EM citations, $B = 1.65, p < .001$. This suggests that firms with patterns of insider trading would have, on average, 1.65 units more citations than firms without patterns of insider trading, as interpreted from the unstandardized beta coefficient. Accordingly, I rejected the null hypothesis. I present the full results of this regression model in Table 5.

Table 5

Results for Linear Regression with Patterns of Insider Trading and Firm Size

Variable	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>	95% CI
(Intercept)	0.16	0.18	0.00	0.92	.360	[-0.19, 0.52]
Patterns of Insider Trading (reference: not present)						
Present	1.65	0.19	0.69	8.53	< .001	[1.27, 2.04]
Firm Size (reference: small)						
Medium	0.32	0.22	0.12	1.46	.148	[-0.12, 0.76]
Large	0.57	0.22	0.22	2.56	.013	[0.13, 1.02]

Summary

I sampled 77 firms that met the inclusion criteria from archival data dating from January 1, 2002 to December 31, 2012. I collected data from a series of publicly available financial reports. There were no firms with missing data or outlying values. Most firms were medium and large. Over half of the sample had patterns of insider trading present. The results of hypothesis testing indicated that the null hypothesis could be rejected, as there was a significant association between patterns of insider trading and number of EM citations. Firms with patterns of insider trading were predicted to have more citations than those without patterns of insider trading. There was also a significant association between firm size and number of EM citations. Large firms were predicted to have more citations than small firms; there was no change predicted from medium firms. I discuss these results within the context of the relevant literature in Chapter 5. I also discuss the strengths and limitations of the study. Finally, I give recommendations for future research.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this quantitative, non-experimental study was to examine the association between insider trading patterns and EM citations for a randomly selected sample of publicly traded companies. I analyzed insider trading patterns and EM through AEM and REM with year-end financial reports, stock options, proxies, and other filings of selected companies. I used these data sources to determine what association exists between insider trading patterns and EM citation between 2002 and 2012.

Through this quantitative research study, I examined insider trading patterns and EM citations after the SOX Act of 2002 during a 10-year period from January 1, 2002 to December 31, 2012. The categorical independent variable was insider trading patterns. The continuous dependent variable was number of EM citations. I included firm size as a covariate. I focused on a sample of 77 firms that were randomly selected from publicly trading companies listed in the NYSE, and used archival data from the SEC, Compustat, Institutional Brokers Estimates System, CDA Spectrum database, Execucomp database, and the NYSE. I sought to determine whether there was a relationship between EM and insider trading patterns controlling for the size of the firm. The results of my testing showed that there is a significant relationship between EM and insider trading.

Interpretation of the Findings

There is a widespread problem of corporate accounting fraud increasingly manifesting as EM (Lin & Wu, 2015). Corporate scandals such as this have brought down leading firms like Enron, HealthSouth, Tyco, and WorldCom, resulting in

decreased trust amongst investors. Financial misconduct is often associated with large stock price decline, SEC inquiry, top executive change or turnover, insider trading, and bankruptcy filings (Agrawal & Cooper, 2015). As such, corporate financial-reporting practices have been put under scrutiny (Chan et al., 2012; Nwogugu, 2015).

Through this quantitative research study, I examined insider trading patterns and EM citations after the SOX Act of 2002 until 2012. I also attempted to expand the comprehension of the importance of EM and insider trading patterns; though some researchers have argued that it is impossible to outdo the market because all information is available to all (Yusoff et al., 2015), many researchers have refuted this claim (e.g., Chan et al., 2012), which the findings of this study support. The findings indicated that there is an association between number of EM citation and patterns of insider trading in the publicly traded firms after controlling for firm size. Firms with patterns of insider trading were predicted to have more citations than those without patterns of insider trading.

The theoretical framework for this study was based on the accounting, finance, and auditing theories of Arens et al. (2014), Glover et al. (2014), Fruhan (1979), and Haugen (2001) as well as financial theories of portfolio performance. These theories address the nature of EM, corporate finance, risks and returns investments, cost of capital, auditing, and assurance services with respect to firms' managements of their earnings through investments, and fees charged during audits engagements (deHaan et

al., 2015). These theories also address the nature of how investors value investment portfolios as well as the governance needed to sustain the firm (Dittmar & Field, 2015).

I built my study on past research studies that have been conducted to investigate what used to be common practice before the enactment of the SOX Act in 2002 (Hossain et al., 2011). After the law was passed in Congress, it changed the way companies did business and affected managing the firm's earnings. I also built on past research on corporate fraud and its effects on firms' post-SOX Act (2000-2012) in publicly trading companies to see if there was an effect on prevention of insider trading to boost EM. Through my study, I was able to discover more information on EM, insider trading, corporate governance, corporate social responsibility, audit fees, auditor independence, financial reporting, and how the public as well as investors value the information that they receive. Additionally, by focusing on 2002 to 2012, my study was aligned with preexisting literature on facets of insider trading, market manipulation, and general operating practices of publicly-traded firms after the passing of the SOX Act (DeHaan et al., 2015; Dittmar & Field, 2015). As such, credibility is lent to the current study's focus on the time that was chosen.

In addition to the theories used in the study, in corporate finance, the pecking order theory is used to postulate that the cost of financing increases with asymmetric information when financing comes from three different sources: internal funds, debts, and new equity. Donaldson (1961) first introduced the pecking order theory, which was later modified by Myers and Majluf (1984). The theory helps describe how companies give

priority to their source of financing by starting internally before using equity to finance projects (Lemmon & Zender, 2016). Pecking order theory starts with asymmetric information due to managers knowing more about the prospects of their companies (Donaldson, 1961). Asymmetric information favors the issue of debt over equity. Debt signals the board's confidence that an investment is profitable and that the current stock price is undervalued. The issue of equity signals a lack of confidence in the board and constitutes that the share price is over-valued, leading to a decrease in share price. This was related to my research as it centered on how information has been processed and how the information is delivered to the outside investor. With corporation managers or executives having firsthand information, they can say this information can, and should be, delivered (Lemmon & Zender, 2016). My study demonstrated that managers took advantage of information that was within the firm before disclosing to investors, thereby allowing them to engage in insider trading that leads to EM citations

Furthermore, I attempted to show that insider trading patterns led to earnings manipulation where it is hinged on maximizing profitability at the detriment of the firm. This can be linked with behaviorist practices in financial theory, wherein individuals, when faced with certain circumstances, will attempt to maximize any opportunity out there and seek the greatest profit possible either for their own personal gain or for the increased value of the firm (Agrawal & Cooper 2015). Although behavioral theories were not at the focus of the current study, they may provide some insight as to why insider trading patterns and EM have occurred within publicly-traded firms. Regardless,

behavioral theory applies to the profit maximization sought by corporate insiders who engage in insider trading. It would also be appropriate to assume that the behavioral theory would, at a bare minimum, modify the desires of corporate insiders. Stakeholders in publicly traded firms seek optimal maximization of profit that will increase the firm value by putting out correct and reliable information for everyone to see and use at the same time and make well-informed decisions.

Limitations of the Study

All research studies are not the same, so there is always the chance that there are some limitations regarding the process of any study. I encountered some limitations to the study, the first of which pertained to both the limited resources and literature on insider trading. Many peer-reviewed journals and articles have dated information regarding insider trading when compared to current research regarding EM. As such, the limited amount of literature prolonged the timing of this research. EM and insider trading are closely related, which affects firms in many ways. Furthermore, both EM and insider trading may influence decision-making and may potentially reflect negatively on the firm.

Another limitation of this study is related to the sites from which I collected data. I collected data from the SEC website, Yahoo finance, and Morningstar. I initially thought it would be easy to get data, but the SEC website was difficult to search for companies to examine. This prolonged the data collection process, as I had to go to different parts of the site to obtain the necessary information. With EM and insider

trading, it is good that it is exposed as much as possible. With the way this information is hidden, it will be hard for prospective investors to do any kind of investigation or research of their own before making the decision to invest in a company that has already been cited for earnings manipulation because of insider trading.

One other limitation worthy of mention is the use of secondary data. The source of information utilized for this research study is all archival and secondary data. The firms that were examined came from the SEC, Yahoo Finance, Morning Star, as well as the NYSE website. All reports—ranging from financial reports, 10K, 10Q, litigations, and trading—also came from the SEC website and this information was released over a 12-year period; as such, any mistakes made in reporting may not be recognized. I have attempted to eliminate overlapping insider trading and EM that were not in the period of review. However, other factors, such as earnings announcements, may have influenced the same period.

My study covers an 11-year period of 2002-2012 starting with January 1st of 2002 to December 31st of 2012. I did not examine any periods outside of the timeframe, so this limited the data findings strictly to that period. Tracing of information that is related to insider trading patterns and EM as well as earnings announcements opens the door for generalization of the study to other areas of knowledge acquisition. As I have shown, insider trading influences EM. It is logical that any other insider trading patterns would cause a similar reaction that will lead to earnings manipulation. Further study would reveal the possibilities with this.

Recommendations

Since it has been established that there is an association between insider trading patterns and EM citation, I have made the following recommendations to provide a starting point that will assist firms, investors, regulators, auditors, as well as the general public in spotting insider trading that will lead to earnings manipulation before it happens. The first recommendation is that the correct information that assists in mitigating insider trading should be provided to all interested parties. Because corporate insiders often receive information first, there is a need for firms to disseminate correct information to its stakeholders and employees, as well as ensure that the information is both validated and reliable. If the information is both valid and reliable, there is a potential for prospective investors to make good decisions if they want to invest in the firm.

The second recommendation is that financial reporting and reporting format should be used to identify any new insider trading patterns that are associated with financial statements. Using both financial reporting and reporting format is no different than using sales, accounts receivables, and inventory methods to see if these have been manipulated in any way to increase earnings. The 1998-2007 Treadway Commission reported that revenue (sales) fraud was used more often as it was discovered that over 60% of the cases that were assessed by SEC were engaged in one form of insider trading.

The use of non-financial measures can be implemented to identify different patterns of insider trading through corporate governance, which is the third

recommendation. This recommendation is rooted in the findings of Treadway Commission report as well as the findings of the current study, wherein it was found that when insiders control more than 50% of the board, there tends to be higher indicators of fraud as a result of insider trading and earnings manipulation. Thus, it is pertinent that these findings be presented to regulators, investors, and auditors so that they will be able to advise their clients on prior insider trends or any earnings manipulation are present and the need to ensure strong internal control measures and corporate governance measures are in place and functional to stop such practices. Rezaee (2005) summarized that corporations with strong corporate governance and strong internal control rarely experienced financial statement fraud.

Another recommendation is that colleges and universities should introduce forensic accounting into the accounting curriculum. The focus should be on areas of fraudulent financial reporting as well as insider trading and earnings manipulation. Current cases on insider trading and earnings manipulation should be incorporated into the classes so that students will be able to see what is happening and trending in the accounting profession.

Finally, top executives have been found to be the greatest perpetrators in many insider trading cases that lead to EM citation. Therefore, it is recommended that investigations occur regarding motives behind these acts by trying to identify key characteristics of the individuals engaged in insider trading. It would be similarly beneficial to examine the relationship between the role of the regulators and the auditors

in the identifying insider trading and EM as well as the types of tools that can assist them in this process. Implementing these steps, as well as engaging in future research, will be able to ensure that the regulators, investors, auditors, the general public as well as other interested parties are prepared to fight against the dire consequences that insider trading and EM have had on the society.

Implications to Social Change

Loss of trust, audit failures, job losses, indictments, and other failures in the business world have diminished the trust and confidence that investors, regulators, the general public, and auditors had for the financial sector. Insider trading and EM have continued to expand, leading to financial statement fraud that is still prevalent and continues to derail the financial system as well as the business sector. Interestingly, insider trading and EM have been mentioned numerous on an individual basis as the leading cause of fraud in corporations but have not been investigated together as one unit. This research study intended to change this trend by centering on the research question that was posed in the study regarding the association between number of EM citations and patterns of insider trading in publicly trading firms. Findings from this study demonstrate that there is an association between insider trading patterns and EM citation controlling for firm size. This is enabled by a number of factors such as how information is disseminated to the investors, through stock options purchases, incentives based on performance, compensation structures, lack of corporate governance, top executive spur of the moment decisions to invest without proper vetting of the portfolio, as well as the

number of insiders who sit on the board of the firms. Business management professionals may want to be able to allow for the dissemination of information on a strategic basis (deHaan et al., 2015).

By understanding the relationship between insider trading patterns and EM citation, regulators, investors, auditors, the public, and other interested parties have the chance to identify any insider trading patterns before they happen and be able to discover ways to reduce insider trading that will lead to earnings manipulation. In doing so, this may potentially lead to the demise of the corporation, allowing for the development of various models to incorporate factors such as ratios and corporate governance that will assist with spotting possible trading and earnings manipulation.

With the lessons learned, recommendations, and suggestions for future studies, this study will be able to contribute to the accounting and finance literature by introducing different ways to observe insider trading patterns and EM as a combined focus. It is the intent of this study that investors, regulators, auditors, the general public and other interested parties will be able to learn from past issues and mistakes and use the insight gained from this research study to inspire them to work with other scholars and academics to bring back the confidence in the financial markets as well as the accounting profession. Working together will facilitate positive social change by reducing the economic and social effects, such as loss of jobs and bankruptcies that insider trading and EM have had on the financial and business sectors and society as a whole.

Conclusion

Insider trading and EM are not inherently negative when they are used the way in which they were intended. Because insider trading has not been defined as either good or bad, many firms have taken advantage of it by circumventing the policies that surround it in the hopes that they will not be caught. Similar to insider trading, EM has been used in ways that reflect negatively on firms, where firm members have used it to perpetuate fraud by using the discretionary measures available to firms or executives making decisions such as stock buybacks or classification shifting. In a time when the spoken or written word from the corporation influences how decisions are made by investors, prospective investors, or the public, it is important to understand how and when to announce organizational intent based on the type and kind of information that is being passed out to those that will be affected by such information. Making announcements that pertain to earnings in the wrong way, giving false information to investors, and withholding the correct information from all or passing the information to a limited few could lead or result in organizational failure or lead to bankruptcies. In an atmosphere of competition for corporate survival, it is essential for corporate management to have all the pieces of the corporate puzzle in mind when making decisions. The more information there is available for decision-making purposes, the greater the opportunities for corporate growth and social development. Additional knowledge leads to greater decision-making and worldwide success.

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